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In the Supreme Court of the United States

UNITED STATES DEPARTMENT OF TRANSPORTATION, ET AL., PETITIONERS

v.

PUBLIC CITIZEN, ET AL.

ON WRIT OF CERTIORARI TO THE UNITED STATES COURT OF APPEALS FOR THE NINTH CIRCUIT

JOINT APPENDIX
VOLUME II

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TABLE OF CONTENTS

Volume I Page

Docket Entries, United States Court of Appeals for the Ninth Circuit, No. 02-70986 1

Docket Entries, United States Court of Appeals for the Ninth Circuit, No. 02-71249 17

FMCSA, Regulatory Analysis and Regulatory Flexibility Analysis (Dec. 2001) 31

FMCSA, Finding of No Siginficant Impact (Jan. 16, 2002) 34

FMCSA, Environmental Assessment (Jan. 16, 2002) 36

Volume II

Comments of Cal. Att'y Gen. Bill Lockyer (DOT filed Oct. 2, 2001) 232

GAO, *North American Free Trade Agreement: Coordinated Operational Plan Needed, etc.* (Dec. 2001) 249

NAFTA Arbitral Panel Final Report, No. USA-Mex-98-2008-01 (Feb. 6, 2001) 258

Comments of Friends of the Earth, NRDC, et al. (DOT filed July 2, 2001) 283

Comments of Int'l Bhd. of Teamsters, et al. (DOT filed Apr. 18, 2002) 296

Sierra Research, Inc., *Critical Review of * * * "Final Programmatic Environmental Assessment," etc.* (Apr. 16, 2002) 307

Additional Comments of Cal. Att'y Gen. Bill Lockyer (DOT filed May 17, 2002) 372

Environ, Review of Emissions Increases, etc. (Apr. 18, 2002) 387

Declaration of James M. Lyons, No. C-02-2115-CW (N.D. Cal. dated Apr. 29, 2002) 414

Tabie of Contents—Continued

	Page
Comments of James M. Lyons (DOT filed May 21, 2002)	
Declaration of Dale Hattis, Ph.D., No. C-02-2115-CW (N.D. Cal. dated Apr. 30, 2002)	435
Declaration of Alison K. Pollack, No. C-02-2115-CW N.D. Cal. dated May 1, 2002)	448
Letter from Paul E. Jacobs, Cal. Air. Res. Bd. (dated May 20, 2002)	469
Comments of Public Citizen, et al. (DOT filed May 20, 200)	473
Gov't C.A. Br. (filed July 22, 2002)	476
Pet. C.A. Evidence in Support of Standing (filed Aug. 2, 2002)	489
Declaration of Laura MacCleery	491
Declaration of John Wilson	496
Declaration of Richard C. Bell	498
Declaration of Anna Sebastian	501

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October 1, 2001

Honorable Julie Anna Cirillo, Deputy Administrator
Federal Motor Carrier Safety Administration
c/o Docket Clerk
U.S. DOT Dockets
Room PL-401
400 Seventh Street, S.W.
Washington, D.C. 20590-0001

RE: Docket Nos. FMCSA 98-3297[-279], 3298[-254], and 3299[-259] *Request to File Late-filed Comments*

TRANSMITTED BY FACSIMILE - HARD COPY TO FOLLOW

Dear Deputy Administrator Cirillo:

California Attorney General Bill Lockyer, acting in his independent capacity to protect the natural resources of the State of California, asks to file these comments on the regulations proposed by the Federal Motor Carrier Safety Administration (FMCSA) that would allow facilitate, and regulate the entry and operation of Mexican carriers in the United States. The

undersigned, on September 26, 2001, at 10:40 a.m. Pacific Daylight Time, spoke with Ms. Valerie Height of the FMCSA, who advised me that your agency is continuing to accept late-filed comments, although she cautioned me that the agency might not be able to consider fully comments filed at this point.

Attorney General Lockyer respectfully submit these comments pursuant to his independent authority to protect the public interest under the California Constitution, common law, and statutes. Along with other California agencies, the Attorney General has the power to protect the natural resources of the State from pollution, impairment, or destruction. (*See* Cal. Const., art., V, § 13, Cal. Gov. Code, §§ 12511, 12600-12; *D'Amico v. Board of Medical Examiners* (1974) 11 Cal 3d, 14-15.) These comments are made on behalf of the Attorney General and not on behalf of any other California agency or office.

We emphasize at the outset that Attorney General Lockyer does not make these comments in any attempt to prevent Mexican trucks from operating in California when FMCSA has fully complied with statutes and regulation applicable to these regulations. We do not seek to exclude trucks owned by Mexican carriers, but we do seek to have the full environmental and fiscal effects of the proposed regulations analyzed, disclosed, and where possible, mitigated pursuant to the National Environment Policy Act, the Clean Air Act, and the Unfunded Mandates Act before the regulations are issued in final form and become effective.

Our office has reviewed the proposed regulations and Regulatory Analysis. We believe that the proposal, contrary to FMCSA's analysis, is a major federal action with the potential significantly to affect the environ-

ment, and that, as such, it must be the subject of full environmental analysis pursuant to the National Environment Policy Act (NEPA), 42 U.S.C. 4321, et seq. Based upon our own, very preliminary analysis, we believe that the FMCSA must prepare a full environmental impact statement (EIS) on the proposals before they can be published in final form. Further, we believe that the FMCSA must prepare a full environmental impact statement (EIS) on the proposals before they can be published in final form. Further, we believe that the FMCSA must prepare and publish a conformity determination, as required by the federal Clean Air Act, 42 U.S.C. § 7506 for the actions that would be permitted and facilitated by the proposed regulations before those regulations may be finally adopted. Finally, we do not believe that the existing Regulatory Analysis supports the finding by FMCSA that the proposed regulations do not violate the Unfunded Mandate Act, and that additional documentation and support for that finding is required before the proposed regulations may be issued in final form. Each of these statutes is discussed more fully below.

National Environmental Policy Act

Allowing Mexican carriers to enter and operate in the United States beyond the existing commercial zone is a change to the status quo that will increase significantly the emission of air pollutants from Mexican trucks in this country, and in California where such trucks are driven in California. The pollutants whose emission will increase include both criteria pollutants such as oxides of nitrogen, and toxic pollutants. Oxides of nitrogen are designated as a criteria pollutant by the Clean Air Act and regulations issue pursuant to it. 42 U.S.C. §7409(a) and (c); 40 C.F.R. § 50.11. The Califor-

nia Air Resources Board has designated particulate exhaust from diesel engines as a toxic air contaminant[1], and diesel engine exhaust is listed as a chemical known to the State of California to cause cancer, pursuant to the Safe Drinking Water and Toxic Enforcement Act of 1986 (commonly known as Proposition 65).[2] The proposed regulations, by allowing the operation of hundreds, perhaps thousands, of trucks in California each day that do not currently operate here, trucks that are not subject to the full panoply of emission control requirements to which California trucks are subject, will allow concomitant increases in pollutant emissions from those trucks.

NEPA's requirements are simple, clear, and apply here. NEPA was passed to ensure that "environmental concerns be integrated into the very process of agency decisionmaking." *Andrus v. Sierra Club*, 442 U.S. 347, 351; 42 U.S.C. 4321. It requires that an Environmental Impact Statement (EIS) be prepared for all "major Federal actions significantly affecting the quality of the quality of the human environment." 42 U.S.C. § 4332(2)(C). If an agency is not sure whether the action requires preparation of an EIS, it must first prepare an Environmental Assessment (EA) to determine whether the action will have a significant effect on the environment. 40 C.F.R. § 1501.4; *Salmon River Concerned Citizens v. Robertson*, 32 F.3d 1346, 1356 (9th Cir. 1994). If the EA establishes that the agency's action may have a significant effect upon the . . . environment, then the agency must prepare an EIS on the action. *Foundation for North American Wild*

[1] Cal. Code of Regs., tit. 17, sec. 93000.

[2] Cal. Code of Regs., tit. 22, sec. 126000.

Sheep v. United States Dep't of Agriculture, 681 F.2d 1172, 1178 (9th Cir. 1982). If it is clear from the EA that the action will not have such a significant effect, the agency issues a Finding of No Significant Impact (FONSI), *see Blue Mountains*, 161 F.3d at 1212 (quoting *Save the Yaak Comm. v. Block*, 840 F.2d 714, 717 (9th Cir. 1988). The record here does not show that FMCSA performed an EA, or issued a FONSI.

We believe that it should have. The increased air pollution that will result from allowing Mexican carriers to operate outside the existing commercial zone is a major federal action with more than significant potential to harm the human environment. The Notice of Proposed Rule Making states that "the proposed action does not require any environmental assessment" and the Regulatory Analysis states explicitly that it does not discuss environmental issues. We therefore do not know the basis upon which FMCSA has made its finding that the proposed regulations do not constitute a major federal action significantly affecting the environment. Because our own analysis leads us to conclude that the proposed regulations will significantly harm the environment, we believe that FMCSA must prepare a full EIS in order to comply with NEPA. At the very least, the agency must prepare an EA. If the EA leads FMCSA to again conclude that the proposed regulations have no significant potential to harm the environment, the agency must issue a FONSI setting out the reasons, backed up by documentation and analysis, to support that conclusion. To this point, FMCSA has done neither, placing it in violation of NEPA.

In making an evaluation of the potential effects on the environment of the proposed regulations, FMCSA must consider not only the effects in the immediate

future, but those that are reasonably foreseeable over the medium and longer term. "Crystal-ball" analysis of uncertain future consequences is not required by NEPA, but a projection of environmental effects from the federal action that can be predicted with reasonable certainly is required. 40 CFR § 1508.17. This is particularly true for air pollution, where planning horizons for State Implementation Plans (SIP) stretch one to two decades into the future. 42 U.S.C. § 7511. It is in this context that FMCSA must determine whether the proposed regulations are a major federal action significantly affecting the environment.

The regulations isued by the Council on Environmental Quality (CEQ) to interpret NEPA provide that whether an action can be considered "significant" depends on many factors, including "the degree to which the proposed action affects public health and safety" and "[w]hether the action threatens a violation of Federal, State, or local law or requirements imposed for the protection of the environment." 40 CFR 1508.27, (2) and (10). Here, the increased diesel engine emissions that will be caused by authorizing Mexican trucks to operate freely outside the commercial zone will result in increased human exposures to diesel exhaust as a whole, and increased human exposure to known carcinogens, such as benzene, that are constituent chemicals in diesel exhaust. These emissions will cause an increase in the risk of cancer and other human health damage. The CEO regulations also provide that the significance of an action should be judged in context. 40 C.F.R. § 1508.27(a). In California, the increase in diesel exhaust emissions will worsen exposure in areas where there is already very considerable exposure to diesel

exhaust, such as the South Coast Air Basin.[3] As an indication of how severe the diesel exposure problem currently is, last year the south Coast Air Quality Management District (SCAQMD), the agency that is responsible to reducing air pollution in the greater Los Angeles metropolitan areas, adopted rules that will require public agencies from school districts to sanitation agencies in that air basin to spend cumulatively millions of dollars to buy low-polluting buses and trucks as they replace or augment their fleets, in an attempt to reduce diesel emissions, emissions of the very type that the Mexican trucks will increase. The increase in diesel emissions in such heavily polluted air basins as the South Coast Basin and the San Joaquin basin that a significant influx of additional trucks will cause must be considered significant, and requires full environmental analysis.

Further, the Mexican trucks will also emit increased oxides of nitrogen, one of the precursors of photochemical ozone pollution (what is commonly referred to as smog). This impact will be significant in the South Coast Basin, one of only two areas of the country with an "extreme" ozone problem.[4] Any increase in emissions of oxides of nitrogen in that air basin may make it virtually impossible for California and the SCAQMD to amend the SIP and craft regulations that will allow the basin to meet federal air quality standards. Such an impact is significant, and on its own requires a full environmental analysis.

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[3] See Los Angeles *Times*, January 13, 2000 (Metro Section), and Orange County *Register*, February 5, 2001.

[4] The other extreme ozone area is Houston, Texas.

As a threshold matter, we do not believe that FMCSA has provided a sufficient basis in fact to support its estimates, whether high, medium, or low, of the number of carriers currently operating in the commercial zone, or operating without appropriate regulatory documentation, *during the moratorium*, and has assumed that the universe of Mexican carriers wishing to operate in the United States will not greatly increase when the moratorium ends. With respect, we do not believe that this assumption has been adequately supported. When the moratorium is lifted, a new, legal market for transport will open to Mexican carriers, and we believe that more documentation of the numbers of carriers that may apply for OP-1 or OP-2 status must be provide before FMCSA may rely on its extremely low estimate of the numbers of carriers that will take advantage of the proposed regulations to enter the U.S. Such documentation should include economic analyses of the transport market in Mexico, and analysis of the possible entry into the Mexican market of foreign companies, including the possibility of American trucking companies establishing Mexican firms or affiliates.

We are aware that, in many respects, the emission standards for *new* Mexican trucks are the same as California standards. However, this is misleading; there are many differences that will cause the Mexican commercial carrier *fleet*, which includes far more older than new trucks, to emit greater amounts of particulate and nitrogen oxide emissions than California trucks. We have had a preliminary examination of the differences made, and summarize the most significant ones below. The technical report from which these facts are drawn will be submitted under separate cover:

1. Mexican trucks were not subject to emissions control regulations prior to 1993, while federal[5] and California trucks were subject to such regulations as of 1987. Thus, while current emissions standards for California and Mexican trucks may be the same (at least, on paper), there were no regulations to ensure, and no assurance is possible, that Mexican trucks manufactured before the advent of emissions regulations in Mexico are controlled to the same level that 1987-93 federal and California trucks are.

2. The overall emission from any given fleet depend to a large degree on the ages of the vehicles that comprise the fleet. Here, not only were Mexican trucks not subject to emissions standards prior to 1993, but the Mexican fleet is, as a whole, of a far greater average age than the federal or California fleet. That is, there is a much higher percentage of vehicles in the Mexican fleet that are older than ten years than there is in the federal or California fleet, a higher percentage that is older than 20 years, and so on, including a higher percentage of trucks that are forty-five years old[6] than can be found in the federal or California fleet. The greater age of the Mexican fleet makes it higher-emitting as a whole.

3. Specifically, the Mexican fleet emits more nitrogen oxides than the California fleet, and will con-

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[5] This letter uses the term "federal" to refer to trucks and buses that were certified to federal standards issued by the U.S. Environmental Protection Agency, and "California" to refer to trucks and buses certified to California's emissions standards by the California Air Resources Board.

[6] As seen in the Mexican trucks now being operated in Imperial and San Diego Counties in California, within the existing commercial zone.

tinue to do so into the future. For the year 2010, the Mexican fleet will emit between 10% and 68% more nitrogen oxides than the California fleet, depending on the age distribution of the Mexican fleet at that time. The situation is even worse for emissions of particulates (the chief cancer risk): in 2010, the Mexican fleet can be expected to emit between 17% and 80% more than the California fleet, again depending on the age distribution of the Mexican fleet. These figures alone constitute a potential for significant environment impacts, and require preparation of an EIS on the proposed regulations.

4. As background, and as the FMCSA must be aware, heavy-duty truck engines are often, perhaps usually, rebuilt during the life of the vehicle. Recently, the U.S. EPA and the California Air Resources Board (CARB) entered into a consent decree with major manufacturers of heavy-duty diesel engines. This consent decree requires that, when heavy-duty engines are rebuilt in the U.S. (including California), they must be rebuilt using low-nitrogen oxide kits supplied by the settling manufacturers. These kits will lower nitrogen oxide emissions from the levels emitted when the trucks were new. However, Mexican trucks are not subject to the consent decree. Presumably, these trucks will be rebuilt with standard techniques, and not using the low-nitrogen oxide kits. Certainly, there is no regulatory requirement that they be rebuilt with low-nitrogen oxide rebuild kits, and FMCSA has no basis to assume that they will be. Accordingly, as truck engines are rebuilt, nitrogen oxide emissions from Mexican trucks will be greater than the corresponding emissions from California trucks of the

same model year, and that difference will continue throughout the life of the rebuild. The current expectation is that the rebuilt trucks will emit about 36% less than the pre-rebuild trucks, meaning that Mexican trucks will emit about 36% *more* than corresponding California trucks from the date of rebuild for the life of the rebuild.[7] Again considering how long Mexican trucks tend to be driven, this will constitute a continuing, and significant, increase in emissions over time, and will harm the environment in which the trucks are driven. In the South Coast Basin, such an increase in nitrogen oxides emissions over currently projected emissions (i.e., those now expected from the operation the truck fleet as it is currently configured in the area) will endanger the attainment of federal and state air quality standards for many years into the future. This constitutes another significant impact that requires an EIR.

5. California has in place a diesel inspection and maintenance program, to ensure that diesel engines in trucks and buses have their emissions control systems periodically inspected, and properly maintained. This program applies only to California diesels, and has been shown to reduce particulate emissions by about 30% on a fleetwide basis, and up to 50% in the case of vehicles that fail roadside tests. Because the program does not apply to Mexican trucks, those trucks will emit, and continue over time to emit, proportionately more than the California trucks that are subject to the program.

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[7] *Development and Use of Heavy-Duty Nox Defeat Device Emission Effects for MOBILE5 and MOBILE6*", M6HDE Report, US EPA, October 1999.

6. Emission from the trucks and buses are directly related to the fuel they burn. Federal and California regulations are now moving to limitations on sulfur in diesel fuel, limiting the sulfur content to 15 parts per million. There is no guarantee that Mexico will adopt and enforce a corresponding limitation on sulfur in diesel fuel available in Mexico. Since excess sulfur can permanently damage and corrupt emission control systems, the difference between California/federal fuel and Mexican fuel presents a serious potential for increased emissions from Mexico trucks.

This list illustrates the variety, and gives an indication of the number and magnitude, of the ways in which Mexican emission standards are not identical with California or federal emissions standards. It is clear that the Mexican truck fleet will emit significantly more nitrogen oxides and particulate matter than the California or federal truck fleets.[8] Before the proposed regulations allow these trucks to release this added pollution in California, FMCSA must comply with NEPA and prepare environmental documentation. We believe that a full EIS is required, and that the regulations cannot legally be finalized until this is done.

In addition to the air pollutant emission questions, we also believe that circumstances with respect to trans-

[8] While any individual carrier's truck may not emit a significant amount by themselves, the CEQ regulations at 40 C.F.R. sec. 1508.27(b)(7) require that actions be evaluated cumulatively with other actions to determine their significance. Thus, FMCSA is required to look at the cumulative emissions that would be caused by all the Mexican carriers' trucks that would increase their operations in California under the proposed regulations in determining whether the action is "significant."

portation of hazardous materials have changed since the time the regulations were proposed. As many news stories have reported, there may now be a terrorist threat from the deliberate misuse of hazardous materials, and terrorists may have sought licenses to transport such materials in order to release or otherwise do harm with them. We understand that your agency is now charged with making a thorough investigation of the potential for terrorist use of hazardous materials in transport. We respectfully suggest that this investigation ought to include an examination of the potential for transport of hazardous materials from Mexico, in Mexican carriers' trucks, and that the potential for harm to the environment from any release of such materials ought to be examined in the EIR that we believe is legally require for these proposed regulations.

The Clear Air Act

The Clear Air Act, 42 U.S.C. 7401, et seq., at 42 U.S.C. section 7506, forbids any federal agency from taking any action that is not conformity with the State Implementation Plans (SIP) that is the overall plan for meeting and maintaining federal air quality standards. This requirement proscribes all federal agencies from permitting or requiring any action that would cause pollutant emissions in excess of those emissions that have been projected and provided for by the States and local governments in the relevant SIP. This is known as "conformity" with the SIP, and all federal agencies are under the affirmative duty to evaluate their actions for such conformity. The FMCSA presents no conformity determination in its proposed rule making, and it does not appear that any was performed. The Clear Air Act makes a consistency determination the affirmative responsibility of federal agency. *Environmental De-*

fense Fund v. EPA, 167 F.3d 641, 643 (D.C. Cir. 1999).[9] Without repeating the list of reasons why the Mexican fleet will emit significant greater amounts of nitrogen oxides than the federal or California fleets, as set forth above, the numbers set out in this letter show that emissions increases to be expected from Mexican trucks are sufficiently large as to be inconsistent with the current emissions inventory and emissions "budget" reflected in the California SIP. This requires a conformity determination by FMCSA, and that determination must be done prior to final agency action, i.e., prior to the issuance of final regulations. We are concerned both with the potential adverse health effects of the increased emissions and with fairness. The ozone problem in California's South Coast Air Basin is truly extreme, and sources that contribute only perhaps one-tenth of one percent of the total pollution inventory are often considered significant. Sources that are not controlled at all in less polluted areas are tightly regulated in the South Coast Basin.[10] The additional emissions put out by Mexican carriers' trucks will require equivalent decreases in emissions from some other source or sources, putting additional burdens on already heavily regulated California industries. Before the regulations are issued that would require such sacrifices from

[9] Although the *EDF* case dealt with transportation projects, consistency is a requirement imposed on all federal agencies and activities.

[10] In the South Coast Air Quality Management District, controls have been enacted on consumer products such a spray deodorants, bakeries, and pleasure boats, all sources whose control was not anticipated even a few years before. Daniel Selmi, *Impacts of Air Quality Regulation on Economic Development*, 13 Fall Nat. Resources & Env't 382 (1998).

California, FMCSA must perform and certify a full conformity analysis.

Unfunded Mandates Act

The Notice of Proposed Rule Making states that there will be less than $100 million in costs to tribes, states, localities, and the private sector from the carrying out of the proposed regulations, and that therefore the regulations do not fall under the requirements of the Unfunded Mandates Act Reform Act of 1995. 2 U.S.C. § 1532, et seq. With all due respect, we do not believe that FMCSA has provided sufficient documentation to support this conclusion. It is clear from the proposed regulations that FMCSA will rely upon border or roadside inspections to determine whether Mexican carriers are actully complying with the safety programs whose documentation FMCSA reviews. However, the Government Accounting Office and the Department of Transportation's own Inspector General have made clear in recent reports that federal inspection of Mexican trucks is woefully underfunded, and that the greatest part of the burden of inspection falls on the States.[11] We believe that FMCSA must develop and disclose a reasonable estimate, supported by appropriate documentation, of the number, length, and cost of inspections, both at the border and at the roadside, that States will be required to perform in order for the federal regulations to provide the assurance of compliance that FMCSA projects and relies upon in calculat-

[11] DOT Office of Inspector General, *Interim Report on Status of Implementing the North American Free Trade Agreement's Cross-Border Trucking Provisions*. IG Report No. MH- 2001-059 (May 8, 2001); General Accounting Office, *Commercial Trucking, Safety and Infrastructure Issues Under the North American Free Trade Agreement*, GAO No. RCED-96-61 (February, 1996)

ing the benefits and burdens of the proposed regulations. FMCSA must assure, pursuant to 2 U.S.C. § 1535, subdivision (a), that the alternative regulatory approach that is least burdensome alternative to the States has been chosen. The Inspector General's report cited above shows that California now performs the most inspections of Mexican trucks crossing the border, and we anticipate that it is on California that the greatest burden of inspection will fall under the proposed regulations. FMCSA is obligated under the Unfunded Mandates Act to properly calculate and disclose the extent of this burden, and to ensure that it has used the least burdensome regulatory approach. We do not believe that FMCSA has complied with these requirements.

Conclusion

Grave and serious questions about public health, environmental harm, potential for terrorism, and financial impacts on already stretched State budgets are presented by the proposed regulations, and have not been adequately analyzed or answered by FMCSA. We believed that the regulations cannot be lawfully adopted in final form until the statutes discussed above have been fully complied with. Attorney General Lockyer thanks the FMCSA for the opportunity to file these comments, and we hope that FMCSA will fully consider them and carry out the actions we have requested herein, including preparation of an EIR, preparation of a conformity determination, and revision of the Unfunded Mandates analysis.

Please feel free to contact my office with any questions.

Sincerely,

/s/ SUSAN L. DURBIN
SUSAN L. DURBIN
Deputy Attorney General

For BILL LOCKYER
Attorney General

United States General Accounting Office

GAO Report to Congressional Requesters

December 2001

NORTH AMERICAN FREE TRADE AGREEMENT

Coordinated Operational Plan Needed to Ensure Mexican Trucks' Compliance With U.S. Standard

GAO
Accountability*Integrity*Reliability

GAO-02-238

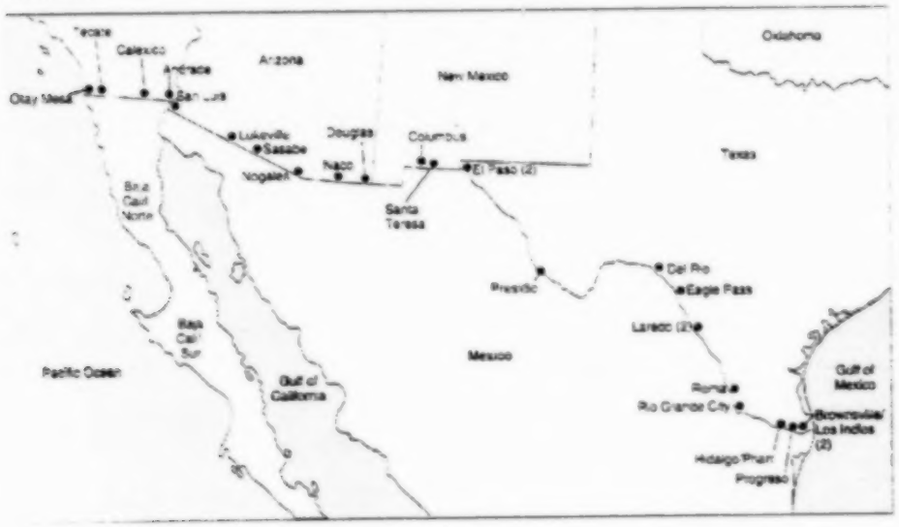
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BACKGROUND

Since NAFTA's implementation, trade between the United States and Mexico has more than doubled, growing from $100 billion in 1994 to $248 billion in 2001.[12] Enhanced trade has increased the number of northbound truck crossing from 2.7 million in fiscal year 2001. According to DOT, about 80, 000 trucks crossed the border in fiscal year 2000, 63,000 of which were estimated to be of Mexican origin. Trucks from Mexico enter the United States at border crossing points in four U.S. states (see fig. 1), but most of the crossings occurred at five ports entry in fiscal 2001: Laredo, El Paso, Hidalgo/Pharr in Texas, and Calexico and Otay Mesa in California.

[12] NAFTA was agreed to by Canada, Mexico, and the United States in 1992 and implemented in 1994.

Figure 1: Commercial Ports of Entry Along the U.S.-Mexico Border



Note: Numbers in parenthesis indicate the number of ports of entry for those with more than one.

Source: GSA and DOT.

Commercial truck traffic at Texas and California ports of entry, which handle approximately 91 percent of truck crossings from Mexico, has grown just over 60 percent since NAFTA went into effect. Table 1 lists the principal commercial ports of entry and the number of truck crossings that occurred at each port in fiscal year 2001.

Table 1: Truck Crossings From Mexico into the United States, Fiscal Year 2001

Location	Truck Crossing	Percentage of total crossing
Texas		
Laredo	1,419,165	33%
El Paso	656,257	15
Hidalgo/Pharr	367,991	9
Brownsville	255,231	6
All Others	223,159	5
Total Texas	2,921,803	68
California		
Otay Mesa	700,453	16
Calexico	259,174	6
All others	63,970	1
Total California	1,023,597	23
Arizona		
Nogales	251,474	6
All others	90,424	2
Total Arizona	341,898	8
New Mexico	34,851	1
Total	4,322,149	100%

Source: U.S. Customs Service.

Under NAFTA, barriers have gradually been reduced for trade in goods and services among Canada, Mexico, and the United States. Among other things, NAFTA allows Mexican commercial vehicles greater access to U.S. highways to facilitate trade between the two countries. Under NAFTA's original timeline, Mexico and the United States agreed to permit commercial trucks to operate within both countries' border states no later than December 18, 1995, and beyond the border states by January 1, 2000.[13]

However, due to U.S. concerns about the safety of Mexican trucks and the adequacy of Mexico's truck safety regulatory system, the United States postponed implementation of NAFTA's cross-border trucking provisions and only permitted Mexican trucks to continue to operate in designated commercial zones within Arizona, California, New Mexico, and Texas.[14]

DOT's Office of Inspector General and GAO have reported that out-of-service rates for Mexican trucks operating in the commercial zones exceeded those of U.S. trucks in the nation as a whole. The Inspector General has also reported that the percentage of Mexican trucks placed out-of-service in the commercial zones declined from 44 percent in fiscal year 1997 to 36 percent in fiscal year 2000.

[13] Canada and the United States have permitted each other's truck complete access to all highways since 1982.

[14] Commercial zones are designated areas where Mexican commercial vehicles are allowed to (1) transfer their cargo to U.S. carriers or (2) unload their cargo for later pick-up by U.S. carriers. Commercial zones generally encompass areas extending between 3 and 20 miles north of U.S. border cities.

In 1998, Mexico challenged the United States' delay in implementing NAFTA's schedule for cross-border trucking. In February 2001, a NAFTA arbitration panel ruled that the United States' blanket refusal to review and consider Mexican motor carrier applications for operating authority to provide cross-border trucking services beyond the commercial zones violated its NAFTA obligations. The panel indicated that under NAFTA, the United States is permitted to establish its own safety standards and ensure that Mexican trucking firms and drivers comply with U.S. safety and operating regulations. However, the panel also noted that due to differing regulatory regimes in each country, the United States need not treat Mexican carriers or drivers exactly the same as those from the United States or Canada, provided that such different treatment is imposed in good faith with respect to a legitimate safety concern and conforms with relevant NAFTA provisions.

In February 2001, the administration announced that it would comply with its NAFTA obligations and allow Mexican commercial carriers to operate beyond the commercial zones by January 2002. In May 2001, DOT issued three proposed rules that would revise existing regulations and application forms and establish a two-tiered application process for Mexican carriers seeking authority to operate within and beyond the commercial zones.[15] Under the proposed rules, a carrier's authority would be conditioned on satisfactory completion of a

[15] Among other things, the rules would require carriers to (1) describe their operations, (2) self-certify that they understand and will comply with U.S. safety standards, and (3) describe their recordkeeping procedures relating to drivers and accidents.

safety audit within 18 months of receiving conditional operating authority.[16]

* * * * *

The small scale and size of Mexican trucking operations could also limit travel beyond the commercial zones. Mexico's truck fleet is relatively small compared with that of the United States, and Mexican trucking association representatives said that their members' fleets have fewer trucks than their U.S. counterparts. For example, there are nearly 600,000 trucking companies with approximately 6.3 million tractors and trailers in the United States, according to DOT. Mexico, in contrast, in 2000[10] had approximately 83,000 federally registered commercial cargo carriers with approximately 277,000 tractors and trailers (trucks may also be registered by Mexican states if they do not drive on federal highways).[11] Further, the overall age of the Mexican commercial vehicle fleet may also limit the number of Mexican carriers able to operate beyond the commercial zones. According to Mexican registration data, in 2000 only 20 percent of the commercial cargo trucks registered for use on Mexican federal highways were manufactured after 1994. Mexican industry officials told us that trucks manufactured in Mexico prior to this date were not built to U.S. safety and emissions standards. Mexican carriers can apply to have older

[16] These safety audits are expected to focus on reviewing a carrier's records and not individual truck inspections.

[10] Secretariat of Communication and Transportation, *Estadistica Basica del Autoransporte Federal.* (Mexico City, Mexico: 2000).

[11] An additional 23,000 vehicles of all types are operated by private trucking companies. Private trucking companies own and operate their own fleet.

vehicles certified to be in compliance with U.S. safety standards. However, Mexican industry officials told us that these vehicles might have difficulties meeting U.S. emissions standards.

Uncertainty about DOT's final rules for obtaining operating authority has reduced the number of Mexican carriers that will initially apply for authority to operate beyond the commercial zones, according to Mexican government and private sector representatives. According to these officials, this uncertainty makes it difficult to plan for the future since union contracts allowing traveling beyond the commercial zones and distribution ties must be established in advance.

Emissions Inspection of Commercial Trucks Vary by State

Under the 1990 Clean Air Act, EPA is required to establish minimum national standards for air pollution and individual states are assigned primary responsibility to ensure compliance with the standards through state implementation plans. Such plans can include truck emissions inspections. Since 1994, EPA's primary role in regulating commercial truck emissions has been to certify compliance of commercial truck engines at the factories where they are manufactured. EPA relies on the commercial truck engine manufacturers to certify that their products meet air emissions standards and conducts spot checks at engine factories.

Some U.S. states have implemented emissions testing requirements for heavy-duty diesel trucks as part of their efforts to meet EPA air quality standards for non-attainment areas.[12] State testing programs differ

[12] EPA defines a non-attainment area as a geographical region that exceeds scientifically accepted levels for certain air pollutants.

significantly, with some states requiring yearly checks of trucks and others operating both annual and more frequent roadside inspection programs. California, which has a large number of areas that do not meet federal air quality standards, including the state's two southern border counties, conducts emissions tests at the border. Since 1999, California has assigned two inspectors each to the ports of entry at Calexico and Otay Mesa to monitor the emissions of U.S. and Mexican heavy-duty vehicles. According to California state officials, in 2000, the failure rate for U.S. trucks was approximately 8 percent, while the failure rate for Mexican trucks was 12 percent.

Arizona also operates an emissions testing program for commercial trucks, but testing is conducted on a yearly basis for trucks registered in the state's two non-attainment areas, Phoenix and Tucson-neither of which are located at the border. Neither Texas nor New Mexico performs emissions inspections at the border.

[FMCSA-98-3297-2]
[FMCSA-98-3298-1]
[FMCSA-98-3299-1]

NORTH AMERICAN FREE TRADE AGREEMENT

ARBITRAL PANEL ESTABLISHED PURSUANT TO CHAPTER TWENTY

IN THE MATTER OF

CROSS-BORDER TRUCKING SERVICES

(Secretariat File No. USA-MEX-98-2008-01)

Final Report of the Panel

February 6, 2001

Panel Members:

J. Martin Hunter (Chair)
Luis Miguel Diaz
David A. Gantz
C. Michael Hathaway
Alejandro Ogarrio

* * * * *

B. The United States' Contentions

153. According to the United States:

> [t]he Mexican safety regime lacks core components, such as comprehensive truck equipment standards and fully functioning roadside inspection or on-site review systems. In light of these important differences in circum-stances, and given the experience to-date with the safety compliance record of Mexican trucks operating in the U.S. border zone, the United States decision to delay processing Mexican carriers' applications for operating authority until further progress is made on cooperative safety efforts is both prudent and consistent with U.S. obligations under the NAFTA.[142]

154. Thus, the United States is not obligated to grant Mexican trucking firms operating authority when there are not yet adequate regulatory measures in place in Mexico to ensure U.S. highway safety.[143] The United States asserts "that NAFTA contains no such requirement. To the contrary, under NAFTA's national treatment and most-favored-nation obligations, a NAFTA Party may treat service providers differently in order to address a legitimate regulatory objective."[144]

155. According to the United States, Mexican carrier safety cannot be assured on a case by case basis: "A carrier-by-carrier approach, however, cannot

[142] USPHS at 2-3.

[143] USCS at 2.

[144] USCS at 2.

> effectively ensure safety compliance by Mexican motor carriers operating in the United States. Rather, as the United States has explained, highway safety can only be assured through a comprehensive, integrated safety regime. It is for this reason that the United States is working with Mexican officials to develop comparable motor carrier safety systems."[145] Nor can the United States, as a practical matter, inspect every truck as it crosses the border.[146]

156. The United States notes the deficiencies of the Mexican oversight system:

> The Government of Mexico cannot identify its carriers and drivers so that unsafe conduct can be properly assigned and reviewed. While we understand that the Government of Mexico is engaged in an extensive effort to register all of its motor carriers and place them in a database that would facilitate the assignment of safety data, that database does not contain any safety data. Therefore, Mexico cannot track the safety fitness of its carriers and drivers. . . . Without such carrier safety performance history, the United States cannot conduct a meaningful safety fitness review of Mexican carriers at the application stage.[147]

157. The United States also contends that it would be futile to try to perform inspections of Mexican carriers in Mexico because "Mexican carriers are

[145] USPHS at 3.

[146] USPHS at 4.

[147] USPHS at 5.

not required to keep the types of records that are typically reviewed in these inspections." Even if an effort were made, it "could not be corroborated until the Government of Mexico develops and implements information systems to collect and make available that information."[148] Nor has there been any U.S. verification experience in Mexico: "The United States has never performed a compliance review or any other type of carrier or truck inspection in Mexico or issued any 'qualification or approval' to a Mexican carrier based on a visit to a carrier's offices."[149]

158. The United States also disagrees with Mexico's reliance on Article 105. According to the United States," the intent of Article 105 is simply to clarify that each NAFTA Party is responsible for ensuring that its state and provincial governments are in compliance with NAFTA obligations." Moreover, "Nothing in Article 105 suggests that measures entailing cooperation between NAFTA Parties are somehow forbidden or excluded."[150]

159. The United States (and Canadian) truck safety programs are the key to providing like circumstances in which trucks operate: they "provide a

[148] USPHS at 6.

[149] USPHS at 7. Although the United States asserts that it has never been able to perform compliance reviews in Mexico, Mexico disputes this fact. In its initial submission, Mexico observed that in 1997, USDOT officials, accompanied by Mexican officials, did indeed make visits to several Mexican motor carriers. According to Mexico, these U.S. officials were satisfied with the conditions they found during these inspections. MIS at 44-45.

[150] USSS at 19-20.

high degree of assurance that U.S. and Canadian trucks operating on U.S. highways each day meet minimum safety standards." The principal elements of the U.S. truck safety program include:

> a comprehensive system of rigorous vehicle and operator safety standards; enforcement through road side inspections and onsite compliance reviews; strict record-keeping rules; electronic databases that promptly provide inspectors in the field with safety-related data on drivers and motor carriers; and a substantial commitment of enforcement resources and personnel.[151]

160. According to the United States," Adequate assurances of safety also require that Mexico, as Canada has done, adopt safety controls within its own borders. The United States has been engaged in extensive cooperative efforts with Mexico to assist in the development of the Mexican safety system. Although Mexico has made substantial progress, work remains undone." Under these factual circumstances, "NAFTA's national treatment and most-favored-nation obligations do not, as Mexico argues, require the United States to treat Mexican trucking firms in the same manner as U.S. and Canadian firms."[152]

161. In particular, NAFTA does not obligate:

> the United States to license the operation of Mexican trucking firms in circumstances in which: (1) serious concerns persist regarding

[151] USCS at 2.

[152] USCS at 2-3.

their overall safety record; (2) Mexico is still developing first-line regulatory and enforcement measures needed to address trucking safety standards; and (3) essential bilateral cooperative arrangements are not fully in place.[153]

162. Moreover, the United States contends that under Rule 33 of the Chapter Twenty Rules of Procedure, the burden of proving violations of Article 1202 and 1203, is on Mexico, "including the burden of proving relevant regulatory circumstances and demonstrating that those circumstances are 'like'."[154]

163. The United States suggests that:

> to prove that a particular measure adopted or maintained by another NAFTA Party is inconsistent with Articles 1202 and 1203, the complaining Party must demonstrate each of the material elements of those [a]rticles. Those include showing: 1) the existence of one or more measures adopted or maintained by a Party; 2) that the measure(s) relate to crossborder trade in services; 3) the treatment accorded by the measure(s); 4) the extent to which that treatment may favor domestic, or certain foreign, service providers over the providers of the complaining Party; 5) the relevant "circumstances" under which that

[153] USCS at 35.

[154] USCS at 42.

> treatment is accorded; and 6) whether those circumstances are "like".[155]

164. Mexico is faulted for failing to address all of these elements: Most importantly, it has failed to describe the "circumstances" under which the United States is treating Mexican Firms for safety purposes. Moreover, Mexico has also neglected to demonstrate that those circumstances are "like" the circumstances that pertain to the regulation of U.S. and Canadian trucking companies.[156]

165. The inclusion of the qualifying "like circumstances" language "permits NAFTA Parties to accord differential, and even less favorable, treatment where appropriate to meet legitimate regulatory objectives."[157] The United States quotes with approval from Mexico's opening submission, "even if Mexican carriers were somehow not exactly 'like' U.S. and Canadian carriers, it was within the power of the United States to impose requirements that would make them 'like.'"[158] However, the United States differs with Mexico on the fundamental issue of whether "Mexican carriers are 'like' U.S. and Canadian carriers for purposes of applying NAFTA's national treatment and MFN provisions."[159]

166. The United States reviews the use of the term "like circumstances" in U.S. bilateral investment

[155] USCS at 39.

[156] USCS at 39.

[157] USCS at 39.

[158] MRS at 13.

[159] USSS at 6.

treaties, arguing that NAFTA language is derived fromthem, even though the BIT language is "in like situations."[160] Here and in the FTA, national treatment does not mean that a particular measure must in every case accord exactly the same treatment to U.S. and Canadian Service providers. Under paragraph three of FTA Article 1402, covered service providers from the two countries may be treated differently to the extent necessary for prudential, fiduciary, health and safety, or consumer protection reasons, as long as the treatment is equivalent in effect to that accorded to domestic service providers and the party adopting the measure provides advance notice to the other in conformity with Article 1803.[161]

167. According to the United States, NAFTA negotiating history confirms this earlier approach to the "in like circumstances" language, adopting "in like circumstances" on the understanding that it had similar meaning to "like services and services providers," as preferred originally by Canada and Mexico.[162]

168. Further support for the U.S. position is found in the U.S. Statement of Administration Action, which provides in pertinent part that "Foreign service providers can be treated differently if circumstances warrant. For example, a state may impose special requirements on Canadian and Mexican service providers if necessary to protect

[160] USSS at 6-7.

[161] USSS at 9-10, *citation omitted.*

[162] USSS at 11-12.

consumers to the same degree as they are protected in respect of local firms."[163] Similarly, the Canadian Statement of Implementation provides that " a Party may impose different legal requirements on other NAFTA service providers to ensure that domestic consumers are protected to the same degree as they are in respect of domestic firms."[164] Thus, "the 'like circumstances' language of Articles 1202 and 1203 makes clear that the United States may make and apply legitimate regulatory distinctions for purposes of ensuring the safety of U.S. roadways."[165]

169. The United States also contends that "The regulatory environment in which U.S., Canadian, and Mexican trucking firms operate is a critical 'circumstance' relevant to U.S. treatment of those firms because it helps to establish industry safety practices in the three countries. As elaborated in the Statement of Facts [of the U.S. submission], Mexican carriers in fact operate within a less stringent regulatory regime than that in place in either Canada or the United States."[166] The problem areas include driver hours of service: "U.S. and Canadian safety rules strictly limit drivers' hours of service. Mexican truck drivers are only governed by the more general rules of Mexican labor laws, with no safety regulation

[163] USCS at 40-41, *emphasis supplied by U.S.*

[164] USCS at 41.

[165] USCS at 42.

[166] USCS at 43.

directly applicable to the time a drivermay spend behind the wheel."[167]

170. Also, "U.S. and Canadian safety regulations require drivers to keep logbooks, the only practicable way to enforce hours of service regulations. Other than for hazardous materials, Mexico has no logbook requirements."[168] Moreover, "U.S. and Canadian safety regulations include exhaustive equipment regulations address to truck safety. Mexico, however, lacks specific regulations governing the condition and maintenance of CMV safety equipment."[169] Other problematic aspects of Mexico's motor carrier regulatory system relate to inspections by the motor carrier itself and government safety inspections.[170]

171. The United States observes that "[a]nother circumstance relevant to the treatment of U.S., Canadian, and Mexican trucking firms is the ability of U.S. transportation safety authorities to enforce U.S. safety regulations with respect to those carriers."[171] While the "maintenance of government databases of accident and safety records, with respect to both firms and drivers, is an important element of safety regulation in the United States (and Canada) . . . the United States has no access to similar data for Mexican firms ordrivers."[172] Moreover, "U.S. highway

[167] USCS at 43.

[168] USCS at 44.

[169] USCS at 44.

[170] USCS at 44.

[171] USCS at 45.

[172] USCS at 45.

safety regulators rely in part on their ability to conduct on-site audits and inspections of U.S. firms and, where appropriate, to impose civil or criminal penalties." However, "U.S. regulators have no right to conduct inspections or audits in Mexico, only limited and recent experience with Mexico on joint inspections (by contrast with a long track record with Canada), and limited ability to impose and collect civil or criminal penalties with respect to Mexican firms that might ignore U.S. safety regulations."[173]

172. A further major U.S. concern regarding "treatment of U.S., Canadian, and Mexican carriers is available evidence regarding the comparative safety records of firms operating in the United States. . . . Mexican trucks operating in the United States have a significantly higher incidence of being placed out of service for safety problems uncovered in random inspections. In particular, the available data show that the out-of-service rate for Mexican carriers is over 50 percent higher than the rate for U.S. carriers."[174]

173. In contrast to Mexico's system, the United States notes that "Canada's truck safety rules and regulations are highly compatible with those of the United States."[175] Thus, "when Canadian-based commercial trucks cross into the United States, federal and state transportation authorities can have a high level of confidence that those trucks comply with U.S. standards and require-

[173] USCS at 45.

[174] USCS at 45-46.

[175] USCS at 47.

ments at least to the same degree as U.S.-based trucks. That confidence level is bolstered by a fully functioning, computerized bilateral data exchange program."[176] Under these circumstances, "when Mexican trucks cross into the United States, there is no assurance that, based on the regulatory regime in place in Mexico, those trucks already meet U.S. highway safety standards."[177]

174. Given all of these considerations, the "United States has . . . concluded that the 'circumstances' relevant to the treatment of Mexican-based trucking firms for safety purposes are not 'like' those applicable to the treatment of Canadian and U.S. carriers."[178] Accordingly, "the United States may apply more favorable treatment to U.S. and Canadian trucking firms than to their Mexican counterparts without running afoul of Chapter Twelve's national treatment or most-favored-nation rules."[179]

175. The United States further notes that Mexico has presented no data on truck safety enforcement in Mexico, and states that although "Mexico does allege that 'it was within the power of the United States to impose requirements' that make Mexican carriers 'like' U.S. and Canadian carriers," Mexico has failed to explain "what those requirements might be nor how such requirements would

[176] USCS at 47-48.

[177] USCS at 48.

[178] USCS at 49.

[179] USCS at 49.

be practicable or effective."[180] According to the United States, "this absence of contrary evidence reinforces that the United States, in delaying the processing of Mexican applications until truck safety can be ensured, is acting reasonably, appropriately, and consistently with its NAFTA obligations."[181]

176. With regard to the question of whether high out-of-service rates for Mexican drayage trucks in the border zone are relevant to long-haul experience, the United States contends that "In terms of safety, the service provided by drayage trucks is no different from that provided by long-haul trucks–they haul goods on the same roads, through the same cities and towns through which long-haul trucks operate."[182] In any event, Mexico has not demonstrated that their long-haul trucks are safer. Issuance by the United States of long-haul authority to Mexican trucks "would not, standing alone, prevent a defective drayage truck from operating in the United States beyond the border commercial zone."[183]

177. The United States explains certain carriers are permitted to "transit" U.S. territory from Mexico to Canada because

> the Congress has not granted the U.S. Department of Transportation ("DOT" or "Department") the authority to require such transit carriers to seek operating authority. There-

[180] USSS at 3-4.

[181] USSS at 4.

[182] USPHS at 7.

[183] USPHS at 8.

> fore, transit operations are unaffected by the moratorium on the issuance of operating authority to Mexican motor carriers for operations outside the commercial zone. All firms operating in the United States, however, regardless of whether they are subject to such registration requirements, are subject to DOT's safety jurisdiction.[184]

U.S.-owned, Mexican-domiciled carriers and "grandfathered" carriers are unaffected by the statutory moratorium and thus are also permitted to transport goods from Mexico to the United States beyond the border zone.[185]

178. However, the United States does not believe that the exemption of these groups from the moratorium "demonstrates that the United States does not have authentic safety concerns about Mexican carriers."[186] "The number of carriers entitled to these exemptions represents only a small fraction–about two percent–of Mexican firms engaged in cross-border operations. Specifically, 8,400 Mexican firms have authority to operate in the commercial zones, while a total of only 168 Mexican carriers are entitled to the above discussed exemptions."[187]

179. Mexican motor carriers operating in the border commercial zones are required to obtain special certificates of registration. These carriers are fully subject to all U.S. safety regulations. They

[184] USSS at 20-21.

[185] USSS at 21-22, *citations omitted.*

[186] USSS at 22.

[187] USSS at 22.

must also have trip insurance, must carry evidence of the insurance in their trucks, and must have U.S. registered agents.[188] The United States denies that the use of trip insurance instead of continuous insurance reflects any lack of concern over differences in the safety of U.S. and Mexican carriers operating in the commercial zones. Rather, "[a]n insurer's potential liability arising from trip insurance is just the same as that arising from continuous insurance, and in both cases the insurer has the same incentives to reduce its potential liability."[189]

180. The United States also explains its alleged lack of concern with trailers: "In practice, however, the safety of Mexican trailer components has not been a major issue, because eighty to ninety percent of the trailers used in crossborder trade are in fact U.S.-owned."[190]

181. With regard to national treatment and most-favored-nation obligations, according to the United States,

> the relevant issue is whether the U.S. actions are consistent with its Chapter Twelve national treatment and MFN obligations in light of the different circumstances applicable to U.S. and Canadian trucking firms, on the one hand, and Mexican trucking firms on the other . . . it is acting reasonably and appropriately by delaying the processing of Mexican firms' applications for operating authority while U.S.

[188] USSS at 24.

[189] USSS at 24-25.

[190] USSS at 25-26.

and Mexican transportation officials work cooperatively to establish adequate safety enforcement tools to ensure that the grant of additional operating authority to Mexican firms does not undermine highway safety. Applying NAFTA's national treatment and MFN obligations to this set of facts turns on a close analysis of highway safety issues, not abstract arguments regarding "conditionality".[191]

182. According to the United States, Mexico has failed to meet its burden of proof regarding denial of investment benefits, "because Mexico had not shown that any Mexican national meets the definition of 'investor' in Chapter Eleven."[192] In this respect, the United States disagrees with Mexican reliance on WTO doctrines under which a complaining Party does not have to show trade impact. Moreover, the United States believes under WTO principles "complaining parties bear the burden of proving an alleged violation by a WTO Member of its WTO obligations."[193]

183. The United States, which emphasizes that it has not raised Chapter Nine as a defense,[194] also expresses its disagreement with Mexico's relating of the "in like circumstances" language to Chapter Nine. A NAFTA Party, according to the United States, does not need any NAFTA provision to serve as a "vehicle for" (which,

[191] USSS at 17.

[192] USSS at 26.

[193] USSS at 26-27, *quotation and citation omitted.*

[194] Comments of the United States on the Initial Report of the Panel, December 19, 2000, at 2.

presumably, Mexico means "to authorize") any particular governmental regulation. In applying governmental regulations, NAFTA only comes into play when a particular NAFTA obligation is relevant to the regulation at issue. Chapter Nine imposes certain obligations (such as MFN and national treatment obligations) with respect to standards-related measures, but Chapter Nine is not "the vehicle for application" of standards.

184. According to the United States, if Mexico's argument is predicated on the theory that only NAFTA Chapter Nine could "permit" differential treatment between domestic and foreign service providers, the argument is both circular and inconsistent with the plain text of the agreement.

185. Also, the United States contends that the Parties could not, as Mexico suggests, have intended Chapter Nine to serve as the exclusive "vehicle" for applying standards-related measures because the scope of Chapter Nine is limited to goods and only two services sectors: telecommunications and land transportation services. Chapter Nine does not apply to measures affecting any other services nor to measures affecting investment. Mexico's interpretation would lead to the untenable result that the Parties neglected to provide any "vehicle" for the application of standards-related measures applicable to most services covered by NAFTA and to all investments covered by NAFTA.[195]

[195] USSS at 14-16, *citations omitted.*

186. The United States contends that its position is confirmed by Article 2101, one of the general exceptions, which provides:

> that 'nothing in . . . Chapter Twelve (Cross-Border Trade in Services) . . . shall be construed to prevent the adoption or enforcement by any Party of measures necessary to secure compliance with laws or regulations that are not inconsistent with the provisions of this Agreement, including those relating to health and safety and consumer protection.'[196]

187. Similarly, in the Preamble to NAFTA, the Parties explicitly state their resolve under NAFTA to "preserve their flexibility to safeguard the public welfare."[197] "These provisions illustrate that NAFTA Parties contemplated that their regulatory authorities would retain their ability to make regulatory distinctions with regard to cross-border services trade necessary to protect human health and safety in their territories."[198]

188. The United States also contests Mexico's assertion that a government may not "condition[] . . . market access of its goods and services on the exporting country's adoption of the rules and laws of the importing country."[199] The United States disclaims the applicability of the unadopted

[196] NAFTA Article 2101(2).

[197] USCS at 40.

[198] USCS at 40.

[199] USPHS at 17, *quoting* Mexico.

GATT Panel report in Tuna,[200] and argues that the controlling case is the Appellate Body Report in United States - Import Prohibition of Certain Shrimp and Shrimp Products. It appears to the United States, however, that conditioning access to a Member's domestic market on whether exporting Members comply with, or adopt, a policy or policies unilaterally prescribed by the importing Member may, to some degree, be a common aspect of measures falling within the scope of one or another of the exceptions (a) to (j) of Article XX of GATT 1994.[201]

189. The United States concludes, "Mexico has no support for its proposition that some general principle of international law prohibits the United States from taking account of the exporting Party's regulatory regime."[202]

190. The United States also asserts that Mexico has made no case for nullification or impairment under NAFTA Annex 2004, noting some similarity to the Korean Procurement case in the WTO.[203] According to the United States, Mexico has the burden of showing nullification or impairment and has made no such argument. Also, the United States declares that under NAFTA, a nullification or impairment claim may not be made if it

[200] *United States – Prohibition of Imports of Tuna and Tuna Products from Canada* (Report of the Panel adopted on Feb. 22, 1982, L/5198-29S/91 [hereinafter *Tuna*].

[201] USPHS at 17-18.

[202] USPHS at 18.

[203] USPHS at 10-11.

would be subject to an Article 2101 exception. As the United States has shown, differential treatment for Mexican carriers is warranted by safety concerns, and is thus consistent with the U.S. obligations under the national treatment and MFN provisions of Chapter Twelve. For the very same reasons, (and in the event that the Panel had needed to examine this issue in response to a nullification or impairment claim), the U.S. measure would fall squarely within the scope of Article 2101(2).[204]

191. The United States asserts that the "subjective" motivation for the alleged U.S. violations–as argued by Mexico–should not be the basis for the Panel's analysis. WTO Appellate Body decisions support the position of the United States that the pertinent issue here is whether safety concerns warrant the differential treatment provided to Mexican carriers, and not–as Mexico claims–the subjective motivations of U.S. decision-makers in December 1995.[205]

192. The United States cites to Japan - Alcoholic Beverages,[206] where the Appellate Body determined that "This is not an issue of intent" and determined "an examination in any case of whether dissimilar taxation has been applied so as to afford protection requires a comprehensive and objective analysis of the structure and

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[204] USPHS at 13.

[205] USPHS at 14-17.

[206] *Japan - Taxes on Alcoholic Beverages*, Panel Report adopted Oct. 4, 1996, WT/DS8/AB/R.

application of the measure in question on domestic as compared to imported products."[207]

193. Also, in Chile - Alcoholic Beverages,[208] the Appellate Body noted that

> The subjective intentions inhabiting the minds of individual legislators or regulators do not bear upon the inquiry, if only because they are not accessible to treaty interpreters. It does not follow, however, that the statutory purposes or objectives–that is, the purpose or objectives of a Member's legislature and government as a whole–to the extent that they are given objective expression in the statute itself, are not pertinent.[209]

194. Consequently, the Panel in this case should "likewise examine U.S. compliance with national treatment obligations based on a fact-specific analysis of the U.S. measure and all of the relevant circumstances, and not–as the Appellate Body wrote–on the 'subjective intentions inhabiting the minds of individual . . . regulators.'"[210]

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[207] *Id.* at 28-29, as cited in USPHS at 16.

[208] *Chile- Taxes on Alcoholic Beverages*, Panel Report adopted Dec. 13, 1999, WT/DS87/AB/R.

[209] *Id.* at para. 62, as cited in USPHS at 16, *emphasis in original.*

[210] USPHS at 17.

VII. FINDINGS, DETERMINATIONS AND RECOMMENDATIONS

A. Findings and Determinations

295. On the basis of the analysis set out above, the Panel unanimously determines that the U.S. blanket refusal to review and consider for approval any Mexican-owned carrier applications for authority to provide cross-border trucking services was and remains a breach of the U.S. obligations under Annex I (reservations for existing measures and liberalization commitments), Article 1202 (national treatment for cross-border services), and Article 1203 (most-favored-nation treatment for cross-border services) of NAFTA. An exception to these obligations is not authorized by the "in like circumstances" language in Articles 1202 and 1203, or by the exceptions set out in Chapter Nine or under Article 2102.

296. The Panel unanimously determines that the inadequacies of the Mexican regulatory system provide an insufficient legal basis for the United States to maintain a moratorium on the consideration of applications for U.S. operating authority from Mexican-owned and/or domiciled trucking service providers

297. The Panel further unanimously determines that the United States was and remains in breach of its obligations under Annex I (reservations for existing measures and liberalization commitments), Article 1102 (national treatment), and Article 1103 (most-favored-nation treatment) to permit Mexican nationals to invest in enterprises

in the United States that provide transportation of international cargo within the United States.

298 It is important to note what the Panel is not determining. It is not making a determination that the Parties to NAFTA may not set the level of protection that they consider appropriate in pursuit of legitimate regulatory objectives. It is not disagreeing that the safety of trucking services is a legitimate regulatory objective. Nor is the Panel imposing a limitation on the application of safety standards properly established and applied pursuant to the applicable obligations of the Parties under NAFTA. Furthermore, since the issue before the Panel concerns the so-called "blanket" ban, the Panel expresses neither approval nor disapproval of past determinations by appropriate regulatory authorities relating to the safety of any individual truck operators, drivers or vehicles, as to which the Panel did not receive any submission or evidence.

B. Recommendation

299. The Panel recommends that the United States take appropriate steps to bring its practices with respect to cross-border trucking services and investment into compliance with its obligations under the applicable provisions of NAFTA.

300. The Panel notes that compliance by the United States with its NAFTA obligations would not necessarily require providing favorable consideration to all or to any specific number of applications from Mexican-owned trucking firms, when it is evident that a particular applicant or applicants may be unable to comply with U.S.

trucking regulations when operating in the United States. Nor does it require that all Mexican-domiciled firms currently providing trucking services in the United States be allowed to continue to do, if and when they fail to comply with U.S. safety regulations. The United States may not be required to treat applications from Mexican trucking firms in exactly the same manner as applications from U.S. or Canadian firms, as long as they are reviewed on a case by case basis. U.S. authorities are responsible for the safe operation of trucks within U.S. territory, whether ownership is U.S., Canadian or Mexican.

301. Similarly, it may not be unreasonable for a NAFTA Party to conclude that to ensure compliance with its own local standards by service providers from another NAFTA country, it may be necessary to implement different procedures with respect to such service providers. Thus, to the extent that the inspection and licensing requirements for Mexican trucks and drivers wishing to operate in the United States may not be "like" those in place in the United States, different methods of ensuring compliance with the U.S. regulatory regime may be justifiable. However, if in order to satisfy its own legitimate safety concerns the United States decides, exceptionally, to impose requirements on Mexican carriers that differ from those on U.S. or Canadian carriers, then any such decision must (a) be made in good faith with respect to a legitimate safety concern and (b) implement differing requirements that fully conform with all relevant NAFTA provisions.

302. These consideration are inapplicable with regard to the U.S. refusal to permit Mexican nationals to invest in enterprises in the United States that provide transportation of international cargo within the United States, since both Mexico and the United States have agreed that such investment does not raise issues of safety.

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FRIENDS OF THE EARTHNATURAL RESOURCES DEFENSE COUNCIL**SIERRA CLUB**CENTER FOR INTERNATIONAL ENVIRONMENTAL LAW**

VIA FACSIMILE AND FEDERAL EXPRESS
Comment Clerk

U.S. Dept. of Transportation

Docket Management Facility, Room PL-401
400 Seventh Street, SW
Washington, DC 20590-0001

Re: Comments on Dockets:

1. Proposed Rules for the Revision of Regulations and Applications for Mexican-Domiciled Motor Carriers To Operate in U.S. Municipalities and Commercial Zones on the U.S.-Mexico Border, Fed. Reg. Vol. 66, No. 86 (May 3, 2001). FMCSA-98-3297

2. Proposed Rules for the Application by Certain Mexican Motor Carriers To Operate Beyond U.S. Municipalities and Commercial Zones on the U.S.–Mexico Border, Fed. Reg. Vol. 66, No. 86 (May 3, 2001) FMSC-98-3298

3. Proposed Rules for a Safety Monitoring and Compliance Initiative for Mexican Motor Carriers Operating in the United State, Fed. Reg. Vol. 66, No. 86 (May 3, 2001) FMCSA-98-3299

Dear Comment Clerk:

These comments are submitted on behalf of Friends of the Earth, Natural Resources Defense Council, Center for International Environmental Law, and Sierra Club for inclusion in the dockets of each of the proposed rules and draft guidance referenced above.

Friends of the Earth ("FoE") is an environmental advocacy organization established in 1969 with U.S. offices in Washington, DC, Seattle, WA and Burlington, VT. Friends of the Earth has more than 20,000 members nation-wide, and is dedicated to protecting the planet from environmental degradation; preserving biological, cultural, and ethnic diversity; and empowering citizens to have an influential voice in decisions affecting the quality of their environment—and their lives. A major program of FoE is to advocate for appropriate consideration of environmental consequences stemming from free trade agreements.

The Natural Resources Defense Council ("NRDC") is a national nonprofit environmental organization with more than 500,000 members. Since 1970, our lawyers, scientists, and other environmental specialists have been working to protect the world's natural resources and to improve the quality of the human environment. NRDC has offices in New York City; Washington, D.C.; Los Angeles; and San Francisco.

The Sierra Club is a national environmental advocacy group, founded in 1892, with more than 700,000 members.

The Center for International Environmental Law ("CIEL") is a public interest environmental law organization founded in 1989 to bring the energy and experience of the public interest environmental law movement to the critical task of strengthening and developing international and comparative international environmental law, policy, and management throughout the world. Through its offices in Washington, D.C. and Geneva, CIEL's Trade Program works to ensure that the governance of trade and investment rules inte-

grates environmental protection and promotes sustainable development.

In these rules, the U.S. Department of Transportation's ("DOT") Federal Motor Carrier Safety Administration ("FMCSA") authorizes Mexican-owned trucks to operate on U.S. highways throughout the United States, including within and beyond communities on or near the U.S.-Mexico border. DOT's proposed action raises serious environmental issues that require appropriate consideration and mitigation where possible.

BACKGROUND AND SUMMARY

The comments of FoE, NRDC, Sierra Club, and CIEL concentrate on two concerns: 1) DOT must comply with the National Environmental Policy Act prior to finalizing these proposed rules, and 2) DOT must consider the disproportionate impact these rules will have on the health and safety of children pursuant to Executive Order 13045.

Beginning with the start of its implementation in 1994, The North American Free Trade Agreement ("NAFTA"), has liberalized trade among its signatories the United States, Mexico, and Canada. Among the many legal and policy changes NAFTA required of its signatories to take were new rules governing the shipment of goods and materials by truck. Specifically, NAFTA required that by 1995, Mexican trucks be permitted to drive throughout the U.S.-Mexico border states. NAFTA countries agreed to virtually completely open borders by requiring that trucks from any NAFTA country could drive anywhere in all NAFTA countries.

Limits on the operation of motor carries from Canada were lifted by a Presidential Memorandum from September 20, 1982. However, despite NAFTA's requirements, the Memorandum continued the moratorium for Mexican trucks, citing concerns over the safety of Mexican trucks. The U.S. only permitted them to travel in designated U.S. communities located with 20 miles of the U.S.-Mexico border. These designated communities are used by trucking companies to transfer freight among U.S. and Mexican trucks.

The procedures and regulations of the U.S. and Mexico which apply to motor carriers vary widely. The DOT grants motor carrier authority to operate through an application procedure, and regulates and enforces compliance with laws pertaining to safety and environmental issues through roadside inspections and compliance reviews at a truck company's place of business. Mexico's regulations are different than those in the U.S. as they relate to driver hours of service, driver logbooks, driver qualifications, transport and handling of hazardous substances, and equipment.

After several years of negotiations between Mexico and the U.S. to lift the U.S. moratorium were unsuccessful, on September 22, 1998, Mexico requested the formation of an arbitral panel to resolve the dispute pursuant to NAFTA Article 2008(1). On February 6, 2001, the arbitral panel issued its ruling *In the Matter of Cross-Border Trucking Services* (Secretariat File No. USA-Mex-98-2008-1). The arbitral panel ruled that the U.S. must allow Mexican commercial trucks to carry and deliver cargo throughout the U.S. or else pay trade sanctions for refusal to comply.

This increased truck traffic will result in significant impacts to the environment and raises serious safety issues, including, but not limited to, impacts to air quality, emissions of gasses that cause climate change,

transport, handling, and release of hazardous materials. For instance, less stringent air emission standards apply to Mexican trucks, including diesel fuel standards that allow a higher sulfur content. It is estimated that Mexican trucks produce higher levels of Nitrogen Oxides ("NOx"), volatile organic compounds ("VOC"), carbon monoxide ("CO"), particulate matter less than 10 microns ("PM-10")[1], and carbon dioxide (CO2).[2] In addition, major differences exist between US and Mexico regulations pertaining to the transport and handling of hazardous substances. Mexico's regulations, for example, do not provide detailed construction, inspection, and operating requirements for commercial motor carriers, such as the regulations in the U.S.

DOT MUST PREPARE AN ENVIRONMENTAL ASSESSMENT AND SHOULD PREPARE AN ENVIRONMENTAL IMPACT STATEMENT PRIOR TO FINALIZING PROPOSED FEDERAL RULES IMPLEMENTING THE NAFTA PANEL'S DECISION

DOT's actions will be arbitrary and capricious if it promulgates these proposed regulations without first complying with NEPA, Counsel on Environmental Quality ("CEQ") regulations, and DOT's own procedures.

Enacted in 1970, NEPA requires all federal agencies to identify the harmful effects of projects they undertake, fund, or approve and to consider adoption of

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[1] The release of smaller particulate matter is also released on average at a higher rate by Mexican trucks.

[2] *North American Trade and Transportation Corridors: Environmental Impacts and Mitigation Strategies*, North American Commission for Environmental Cooperation (February 21, 2001) at 9.

alternatives and mitigating measures that will avoid or reduce such impacts. To these ends, Section 102(2)(C) of the Act declares:

> The Congress authorizes and directs that, to the fullest extent possible . . . (2) all agencies of the Federal Government shall—. . . (C) include in every recommendation or report on proposals for legislation and other major Federal actions significantly affecting the quality of the human environment, a detailed statement by the responsible official on—(i) the environmental impact of the proposed action . . . ." 42 U.S.C. § 4332(2)(C).

This mandate is intended to "inject environmental considerations into the federal agency's decision making process" and "to inform the public that the agency considered environmental concerns in its decision making process." *Weinberger v. Catholic Action of Hawaii/Peace Education Project*, 454 U.S. 139, 143 (1981). Because of its importance, the EIS provision only gives way in the face of a "clear and unavoidable conflict in statutory authority." *See Flint Ridge Development Co. v. Scenic Rivers Ass'n of Oklahoma*, 426 U.S. 776, 788 (1976).

To implement the EIS requirement and other provisions of NEPA, the CEQ issued regulations in 1978 that are binding on all federal agencies. 40 C.F.R. Parts 1500-1508. Those rules established certain basic requirements governing preparation and public review of an EIS, and they required each agency to publish its own rules to supplement those of the CEQ. 40 C.F.R. § 1505.1.

Environmental Impact Statements ("EIS") are required for any "major federal action significantly affect-

ing the quality of the human environment."[3] Accordingly, if the DOT decides to grant Mexican trucking companies motor carrier authority under existing regulations or under new regulations, it must determine whether such action constitutes "a major federal action significantly affecting the quality of the human environment." If the determination is affirmative, the agency will be required to prepare an EIS.

Currently, there is nothing in record supporting DOT's proposed decision not to comply with NEPA. If DOT is not certain that an EIS must be prepared, then it must first prepare an EA.[4] Such an assessment is to provide sufficient evidence and analysis for determining whether an EIS is needed, or a finding that the proposed federal action does not have significant environmental impact, and therefore no EIS is needed.[5] In preparing an environmental assessment, the agency must consult with other environmental agencies, applicants, and the public, "to the extent practicable."[6]

DOT's decision to not comply with NEPA is inconsistent with its own rules, CEQ regulations, and the statute itself. The Department of Transportation implemented its NEPA/CEQ requirements pursuant to an order ("DOT Order")[7] that sets out procedures for all constituent agencies within DOT, and delegates responsibility for full compliance to each constituent

[3] 40 C.F.R. §1502.3.

[4] 40 C.F.R. §1501.3(b).

[5] 40 C.F.R. §§ 1508.9(a)(1), 1501.4(b)-(c).

[6] 40 C.F.R. § 1501.4(b).

[7] Department of Transportation Order 5610.1C, as amended (July 30, 1985).

agency. The DOT Order applies to all rulemaking and regulatory actions, including notices of proposed rules.

Under the DOT Order, an EIS shall be prepared for "any proposed major federal action significantly affecting the environment."[8] The DOT also identifies a non-exhaustive list of categorical exclusions which do not require either an EIS or an EA. In addition, the DOT Order requires each constituent agency to provide further guidance and instructions to comply with NEPA (the "implementing instructions").

The implementing instructions may be either (i) detailed instructions or regulations issued by a constituent agency which provides guidance on applying environmental considerations to its programs;[9] or (ii) adoption of the DOT Order itself as its implementing instructions, plus the issuance of supplementary guidance which "at a minimum applies the environmental process to the administration's programs." The supplementary guidance must include, among other things:

- a list of actions which normally require preparation of an EIS,
- a list of actions which are not normally major Federal actions significantly affecting the environment and as such do not require an EA or EIS (*i.e.*, categorical exclusions), and
- identification of the decision-making process.[10]

Moreover, notwithstanding the foregoing, the implementing instructions must provide for the preparation

[8] *See also* 40 C.F.R. § 1502.3.

[9] DOT Order at pg 19, Subparagraph 20 (a)(1).

[10] *Id.* at pg. 20, Subparagraph 20 (b).

of an EA or EIS for actions that would otherwise be categorical exclusions, if those actions are likely to involve a significant impact on the environment or create substantial controversy.

The FMCSA, as a constituent agency within DOT, has not complied with these requirements in issuing its Proposed Rules. Rather, the Proposed Rules only say . . . . (something that indicates briefly how limited they are, then go into specifics of what they fail to do). It has failed to issue detailed instructions or regulations to provide guidance on its environmental process; nor has it adopted supplementary guidance to the DOT Order. It has failed to identify a decision-making process, a list of categorical exclusions, or a list of actions which normally require an EA or EIS. And, the FMCSA has failed to otherwise analyze these rules pursuant to NEPA. The FMCSA is therefore not in compliance with the DOT Order.

DOT may not base its decision that compliance with NEPA is not required for these regulations on the argument that the "impacts to the human environment" are a result of a decision to lift the moratorium on Mexico-owned trucks. The CEQ regulations define a "major federal action" under NEPA as, among other things, "systematic and connected agency decisions allocating agency resources to implement a specific statutory directive or executive directive." 40 C.F.R. § 1508.18(b)(3). CEQ also defines a "major federal action" as "new and continuing activities, including projects and programs entirely or partly financed, assisted, conducted, regulated, or approved by federal agencies; new or revised agency rules, regulations, plans, policies, or procedures; and legislative proposals." 40 C.F.R. § 1508.18(a).

Accordingly, there is no doubt that these rules trigger the need for NEPA compliance.[11]

DOT MUST COMPLY WITH EXECUTIVE ORDER 13045 BECAUSE THE INCREASED POLLUTION AND SAFETY CONCERNS PRESENTED BY THESE RULES CAUSE A DISPROPOTIONATE RISK TO CHILDREN

DOT has determined that it need not prepare identify and assess the health and safety risks that these proposed rules could have on children. In each of the Federal Register notices at issue, DOT asserts that these proposed rules are "not economically significant" and do "not concern an environmental risk to health or safety that may disproportionately affect children." Sufficient evidence exists to compel DOT to reverse this determination, and complete the required analysis under Executive Order 13045.

The purpose of Executive Order 13045 is to assess and consider how federal actions and decision may disproportionately impact children. It requires that each federal agency "(a) shall make it a high priority to identify and assess environmental health risks and safety risks that may disproportionately affect children; and (b) shall ensure that its policies, programs, activities, and standards address disproportionate risks to children that result from environmental health risks and safety risks."[12] The Executive order requires that

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[11] DOT may not finalize these regulations prior to complying with NEPA. According to CEQ regulations, "no action concerning the proposal shall be taken which would: 1) Have an adverse environmental impact; or 2) Limit the choice of reasonable alternatives. 40 C.F.R. § 1506.1.

[12] Executive Order 13045, Fed. Reg. Vol. 62, No. 78, (April 23, 1997).

for each regulatory action subject to it, agencies must conduct "an evaluation of the environmental health or safety effects of the planned regulation on children" and include "an explanation of why the planned regulation is preferable to other potentially effective and reasonably feasible alternatives considered by the agency."[13] These findings are to be submitted to the Office of Management and Budget's Office of Information and Regulatory Affairs for review.

Air pollution, especially particulate matter, affect children more seriously than others in the population. Several U.S. Environmental Protection Agency ("EPA") studies confirm this fact.[14] For instance, EPA finds that air pollution, such as ozone, particulate matter, carbon monoxide, nitrogen dioxide, and sulfur dioxide, "are particularly unhealthy for children." EPA finds that these pollutants cause a disproportionate risk to children because "children breathe more rapidly and inhale more pollutants per pound of body weight than adults, and their airways are more narrow than those of adults and their respiratory systems are still developing."[15] Therefore, an assessment of the risks these proposed rules present to children is required.

DOT has failed to address the disproportionate impacts the environmental health and safety risks resulting from these proposed rules. DOT's conclusory statement that these proposed rules do "not concern and environmental risk to health or safety that may disproportionately affect children" is not supported by the facts now in the record. Accordingly, DOT must

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[13] *Id.*

[14] *www.epa.gov/children/air.htm*

[15] *Id.*

prepare the analysis required by Executive Order 13045 prior to finalizing these rules.

CONCLUSION

DOT must comply with NEPA before finalizing these proposed rules that would allow Mexican-owned trucks to drive throughout the United States resulting in increased air pollution and other environmental hazards. The requirements for agency compliance with NEPA are outlined by the CEQ Regulations. The DOT Order outlines general NEPA procedures and then requires its constituent agencies to issue detailed instructions or supplementary guidance reporting environmental considerations. The FMCSA has not issued either detailed instructions or regulations on its environmental processes or supplemented the DOT Order, nor has it evaluated these rules under NEPA. Therefore, the FMCSA is not in compliance with either the DOT Order, the CEQ Regulations or NEPA.

In addition, the increased air pollution and other environmental risks resulting from these proposed rules presents health and safety risks that would disproportionately affect children. Therefore, compliance with Executive Order 13045 is required.

By failing to consider the environmental and health effects of these rules, both DOT and FMCSA violate NEPA and the Executive Order 13045. These rules

constitute agency action and must comply fully with the requirements of the law. Therefore, DOT should prepare the necessary analysis prior to issuing final rules.

Respectfully submitted,

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April 17, 2002

U.S. Department of Transportation
Dockets Management Facility
Room PL-401
400 Seventh Street, S.W.
Washington, D.C. 20590

Re: 1. Docket No. FMCSA-98-3298; Application by Certain Mexico-Domiciled Motor Carriers To Operate Beyond United States Municipalities and Commercial Zones on the United States-Mexico Border, Interim Final Rule; Request for Comments, 67 Fed. Reg. 12702 (2002)

2. Docket No. FMCSA-98-3299; Safety Monitoring System and Compliance Initiative for Mexico-Domiciled Motor Carriers Operating in the United States, Interim Final Rule, Request for Comments, 67 Fed. Reg. 12758 (2002)

On behalf of the International Brotherhood of Teamsters, the California Federation of Labor, Public Citizen and Natural Resources Defense Council, we submit the following comments on the above-listed actions of the Federal Motor Carrier Safety Administration (FMCSA). Not only will these federal actions significantly increase the overall commerce by truck between Mexico and the U.S., thereby greatly increasing emissions of air pollutants beyond those

amounts that would otherwise be emitted, but they will also allow entry to thousands of Mexico-domiciled trucks, nearly all of which emit higher amounts of air pollutants than the U.S. trucks that they will displace.

These increased emissions will delay timely attainment of the national primary air quality standard (NAAQS) for photochemical oxidants (ozone) in several areas in California and Texas that are currently nonattainment for that standard, and they may delay the attainment of the national primary ambient air quality standard (NAAQS) for particulates (PM10) in several areas in California that are currently nonattainment for that standard. The increased emissions from the influx of Mexico-domiciled trucks allowed by the above-listed actions will also increase the frequency or severity of existing violations of the NAAQS for ozone and particulates. Further, the increased emissions from the Mexico-domiciled trucks will cause or contribute to new violations of the recently issued NAAQS for ozone and fine particulates.

FMCSA has prepared an Environmental Assessment (EA) that purportedly addressed the adverse environmental impacts of above-listed actions, and it has made a finding of no significant impact (FONSI) based upon that assessment. However, the EA is woefully inadequate and by no means supports the associated FONSI. We are enclosing for your review a technical report (hereinafter the "Sierra Research Report")[1], prepared by Sierra Research, a highly-re-

[1] The full title of the Sierra Research Report is "Critical Review of "Safety Oversight for Mexico-Domiciled Commercial Motor Carriers, Final Programmatic Environmental Assessment," Prepared by John A. Volpe Transportation Systems Center, January 2002" (Report No. SR02-04-01).

garded consulting firm that specializes in air pollution assessments on behalf of public and private clients. The authors of this report are recognized experts in the field of air pollution research, particularly from mobile sources. The resumes of the principal authors, James Lyons, Philip Heirigs, and Lori Williams, are enclosed for your consideration.

The Sierra Research Report demonstrates that the above-listed actions constitute a major federal action significantly affecting the quality of the human environment. As such, it is an action for which FMCSA must prepare a full-fledged Environmental Impact Statement ("EIS").

Moreover, aside from failing to prepare an EIS, FMCSA has not prepared a conformity analysis pursuant to section 176 of the Clean Air Act, 42 U.S.C. § 7506, so as to determine the extent to which the influx of Mexico-domiciled trucks will increase emissions in nonattainment areas, the emissions reduction from other sources that will be needed to offset the increased emissions from Mexico-domiciled trucks, and the steps necessary to achieve the offsets. Since the above-listed actions do not conform to the Texas and California implementation plans ("SIPS"), the FMCSA may not engage in or support those actions in any way. The FMCSA also cannot approve any actions by private entities (i.e., the owners and operators of the Mexico-domiciled trucks) that result in the increased emissions described above.

I. The FMCSA's Environmental Assessment Is Grossly Inadequate and Should Be Replaced With a Full-Fledged EIS Prior to Proceeding with the Above-Listed Actions.

Under the National Environmental Policy Act ("NEPA"), 42 U.S.C. §§ 4321, et seq., when a federal agency proposed to undertake a "major federal action significantly affecting the quality of the human environment," it must prepare an EIS detailing its environmental impact, any unavoidable adverse environmental effects, alternatives to the action, local short-term uses versus long-term productivity, and the commitment of any irreversible and irretrievable resources. In 1978, the Council on Environmental Quality ("CEQ") promulgated regulations that federal agencies are required to follow in implementing NEPA. 40 C.F.R. §§ 1500 et seq. In determining whether to prepare in EIS, the agency must ordinarily prepare an environmental assessment (EA). 40 C.F.R. § 1501.4(b). If the EA leads the agency to conclude that an EIS is not necessary, it must prepare a finding of no significant impact (FONSI). 40 C.F.R. § 1501.4(e).

The FMCSA has prepared an EA and a FONSI for the actions that it proposed on May 3, 2001.[2] We assume that the agency intends the EA and FONSI to cover the interim final rules listed above. In any event, the EA and FONSI are legally defective in numerous respects.

For example, the CEQ regulations define the term "effects" to include "[d]irect effects which are caused by the action and occur at the same time and place" and

[2] John A. Volpe Transportation Systems Center, Safety Oversight for Mexico-Domiciled Commercial Motor Carriers, Final Programmatic Environmental Assessment (January 2000).

"indirect effects, which are caused by the action and are later in time or farther removed in distance, but are still reasonably foreseeable." 40 C.F.R. § 1508.8(b). In particular, "indirect effects" may include growth inducing effects . . . and related effects on air and water and other natural systems, including ecosystems." 40 C.F.R. § 1508.8(b). As the agency's EA apparently recognizes, the adverse air quality impacts of the increase in the number of Mexico-domiciled trucks that will come into existing ozone and particulate nonattainment areas and areas that are potentially nonattainment for ozone and fine particulates are clearly indirect effects of the above-listed actions. Yet the EA dismisses these effects, completely disregarding the technical evidence demonstrating that the increased emissions will be substantial.

The EA is also defective in terms of defining the areas that will be impacted. The CEQ regulations define the terms "significantly" to require considerations of both "context" and "intensity." In considering the "context" of the action, the agency must analyze "several contexts" including both "society as a whole" and the "affected region." 40 C.F.R. § 1508.27(a).

Incredibly, the EA prepared by the FMCSA examined only the overall percentage increases in emissions *nationwide* and entirely failed to assess the air quality impact of increased emissions and increased ambient pollutant levels in those areas where the impacts of the no action and proposed action scenarios are likely to be greatest. This approach directly conflicts with the agency's obligation to consider the "affected region." The Sierra Research Report demonstrates that many specific regions and geographic areas will be hard hit as a result of the interim final rules.

In considering the "context" of the action, the CEQ regulations provide that "[b]oth short and long-term effects are relevant." 40 C.F.R. § 1508.27(a). Yet as shown in the Sierra Research Report, the EA prepared by FMCSA considered only the exceedingly short-term impacts of the actions on air quality in the year 2002, *at least half of which will be over by the time that the trucks begin to move across the country.* The use of such a short time frame is preposterous in the context of regulatory decisions that will have such a long life span.

In considering the "intensity" or "severity" of the impact, the agency must examine "the degree to which the proposed action affects public health or safety," "[u]nique characteristics of the geographic area," "[t]he degree to which the effects on the quality of the human environment are likely to be highly controversial," "[t]he degree to which the possible effects on the human environment are highly uncertain or involve unique or unknown risks," and, importantly, "[w]hether the action threatens a violation of Federal, State, or local law or requirements imposed for the protection of the environment." 40 C.F.R. § 1508.27(b). Yet the consideration of these and other critical factors in the EA prepared for FMCSA was grossly inadequate.

More particularly, Sierra Research found that the EA contained the following specific flaws:

- Failing to account for emissions differences between Mexico-domiciled and U.S.-domiciled trucks that exist now and that will become even more significant in the future;
- Improperly assessing the air quality impact of the no action and proposed action scenarios by

comparing the associated increase in emissions to total nationwide emissions from trucks;

- Failing to assess the air quality impact of increased emissions and increased ambient pollutant levels in those areas where the impacts of the no action and proposed action scenarios are likely to be greatest, which include many areas that current do not comply with existing federal air quality requirements and are likely to be out of compliance with future federal requirements;
- Failing to assess the localized air quality impacts of increased numbers of safety inspections;
- Failing to consider increases in emissions of toxic air contaminants resulting from the no action or proposed action alternatives, particularly within the context of the increase in local emissions due to increased numbers of safety inspections; and
- Failing to assess the air quality impacts of the no action and proposed action alternatives over more than a single year or beyond 2002.

The Sierra Research Report found that both the "no action" and "proposed action" alternatives examined in the EA would foreseeably result in adverse air quality impacts in two ways. First, both alternatives would "allow the direct substitution of higher-emitting Mexico-domiciled-domiciled trucks for lower-emitting U.S.-domiciled trucks for freight carrying in the United States." Second, both alternatives would "have the potential to increase overall U.S. truck traffic." Sierra Research concluded that the actions would "present a

particularly significant issue in those areas of the southwestern U.S. that currently violate and are likely to continue to violate health-based federal National Ambient Air Quality Standards (NAAQS) applicable to ozone and fine PM."

Clearly, much more work is necessary before the above listed actions may legally go into effect. The key assumptions underlying the EA are completely flawed. Contrary to the EA, existing research concludes and knowledgeable experts state that the federal actions being proposed through these regulations will indeed significantly increase U.S. truck traffic beyond historical levels. *See, e.g.*, Comment Letter of Mark J. Spalding dated April 17, 2002. The same is true with respect to the potential displacement of U.S. domiciled-trucks by Mexico-domiciled trucks: existing research concludes and reputable sources state that a significant displacement is likely to occur. *See Id.*; "North America Trade and Transportation Corridors: Environmental Impacts and Mitigation Strategies, "prepared for the North American Commission for Environmental Cooperation by ICF Consulting (February 21, 2001) (copy enclosed).

The Sierra Research Report and simple common sense suggest that an action that will have the effect of allowing thousands of heavily polluting Mexico-domiciled trucks to travel through some of the most seriously polluted cities in the United States—cities that are struggling to bring air quality up to healthy levels—will significantly affect the quality of the human environment. The FMCSA must therefore prepare a full-fledged EIS detailing the adverse environmental effects on the most affected regions of the country.

II. The Above-Listed Actions Do Not Conform to the Approved SIPs for California and Texas and Therefore Cannot Be Implemented.

Section 176 of the Clean Air Act provides that "[n]o department, agency, or instrumentality of the Federal Government shall engage in, support in any way or provide financial assistance for, license or permit, or approve, any activity which does not conform to" a State Implementation Plan (SIP) promulgated pursuant to section 110 of the Clean Air Act. 42 U.S.C. § 7506(c)(1). The statute further defines "conformity to an implementation plan" to mean conformity to the plan's purpose of eliminating or reducing the severity and number of violations of the national ambient air quality standards. 42 U.S.C. § 7506(c)(1)(A). It is also defined to mean that "such activities will not—(i) cause or contribute to any new violation of any standard in any area; (ii) increase the frequency or severity of any existing violation of any standard in any area; or (iii) delay timely attainment of any standard or any required interim emission reductions or other milestones in any area." 42 U.S.C. § 7506(c)(1)(B).

EPA's implementing regulations require federal agencies to make a determination that an action conforms to the relevant SIPs based upon a written conformity analysis before taking the action if the action will cause direct or indirect emissions that exceed de minimis levels. 40 C.F.R. § 51.850(b), 51.(b), 51.854. The de minimis level of VOC and Nox emissions vary, depending upon the extent of nonattainment. For serious areas the de minimis level is 50 tons per year (tpy). For severe areas (including Houston, Northwest Los Angeles County, Ventura County, and San Diego)

it is 25 tpy, and for extreme areas (Los Angeles), it is 10 tpy. 40 C.F.R. § 51.853(b).

The Sierra Research Report graphically demonstrates the difference in emissions rates between U.S. trucks and Mexico-domiciled trucks and shows how those differences grow dramatically from 2010 to 2020 to the point at which Mexico-domiciled truck emissions will be almost 4.5 times U.S. truck emissions for both oxides of nitrogen (an ozone precursor) and particulate matter. The emissions will far exceed the de minimis thresholds set out in the EPA regulations. For example, Sierra Research has calculated that if we make the reasonable assumption that 50 percent of the U.S. trucks currently traveling through Houston are replaced by Mexico-domiciled trucks, the increase in Nox emissions by the critical attainment year of 2007 will be 84 tons per *day*, more than three times the de minimis level for *annual* Nox emissions in a serious nonattainment area.

These staggeringly high increases in Nox and particulate emissions must be accounted for the in the emissions budgets for Houston, Dallas/Ft Worth, San Diego, Los Angeles, San Francisco and intervening nonattainment areas, and federally enforceable offsetting emissions reductions must be located and implemented before the FMCSA and NHTSA actions may be allowed to go forward. At the very least, the agencies must prepare their own conformity analysis that assesses the impact over the years of their actions on the nonattainment areas through which the Mexico-domiciled trucks will travel.

III. Conclusion

The easily foreseeable result of implementing the above-described regulations is a large influx of trucks from Mexico that do not conform to the emissions standards with which U.S. trucks must by law comply. Just as foreseeable is a large increase in emissions of NOx, particulate matter, and other toxic air pollutants. Before FMCA may lawfully allow the above-listed regulations to go into effect, the agencies must prepare an EIS detailing the adverse environmental impacts of these increases in emissions. Furthermore, the FMCSA cannot lawfully allow the regulations to go into effect until it has prepared an adequate conformity analysis under section 176 of the Clean Air Act and ensured that the actions will not cause or contribute to any new violation of any standard in any area, increase the frequency or severity of any existing violation of any standard in any area, or delay timely attainment of any standard or any required interim emission reductions or other milestones in any area.

We urgently request that FMCSA not allow the above-listed actions to go into effect until the agency has complied with its legal obligations under the National Environmental Policy Act and the Clean Air Act.

Respectfully Submitted,

/s/ STANLEY S. MALLISON

STANLEY S. MALLISON

REPORT NO. SR02-04-01

CRITICAL REVIEW OF "SAFETY OVERSIGHT FOR MEXICO-DOMICILED COMMERCIAL MOTOR CARRIERS, FINAL PROGRAMMATIC ENVIRONMENTAL ASSESSMENT," PREPARED BY JOHN A VOLPE TRANSPORTATION SYSTEMS CENTER, JANUARY 2002

April 16, 2002

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Critical Review of

"Safety Oversight for Mexico-Domiciled Commercial Motor Carriers, Final Programmatic Environmental Assessment," Prepared by John A Volpe Transportation Systems Center, January 2002

Table of Contents

Executive Summary ..... [1]
Background ..... [4]
Freight Transport and Truck Emissions .....
Relevant Air Quality Issues in the United States . [4]
Implications ..... [4]
Critical Review of FMCSA EA ..... [13]
Summary of FMCSA EA ..... [13]
Flawed Air Quality Analysis Methodolgy ..... [13]
Inappropriate Analysis Period ..... [15]
Differences in Emission Rates of Mexican- and U.S.-Domiciled Class8b Trucks ..... [16]
Failure to Consider Toxic Air Contaminant Impacts ..... [21]
Failure to Properly Assess the Impacts of Air Quality in Specific Areas and to Perform Transportation Conformity Analyses ..... [22]

Appendix A - Estimating the Impacts of Mexican Truck Travel on Emissions from Heavy-Duty Diesel Vehicles in Houston and San Diego

EXECUTIVE SUMMARY

The Federal Motor Carrier Safety Administration (FMCSA) is proposing several actions that may dramatically increase the number of Mexican-domiciled heavy-duty Diesel vehicles operating in the United States and that would lift current restrictions that limit operation of such vehicles to the immediate border. Under the National Environmental Policy Act ("NEPA"; 42 U.S.C. 4371 *et seq.*, enacted in 1969), responsible federal officials must prepare, prior to undertaking "major Federal actions significantly affecting the quality of the human environment," a "detailed statement" (referred to as an Environmental Impact Statement, or EIS) addressing the following aspects of the proposed action: its environmental impact, any unavoidable adverse environmental effects, alternatives to the action, local short-term uses versus long-term productivity, and the commitment of any irreversible and irretrievable resources.

The threshold question in the NEPA process is whether the action is one that "significantly" affects the environment. In 1978, the Council on Environmental Quality (CEQ) adopted formal regulations (40 CFR 1500-1508) governing the NEPA process. The regulations contain a brief description of the process agencies must follow in determining the threshold question of significance. The key definitions are those for "effects" and "significantly." The definition of "effects" (40 CFR 1508.8) requires an examination of direct effects, and also indirect effects that are "reasonably foreseeable" as well as "cumulative." In addition to ecological impacts, the examination must consider "aesthetic, historic, cultural, economic, social and health impacts." The term "significantly" is defined (40 CFR 1508.27) in

terms of two main general parameters, "context" and "intensity," with the latter broken down into ten distinct categories. If the answer to the threshold question of significance is in the affirmative, then an EIS must be prepared; if not, then a Finding of No Significant Impact (FONSI) is permitted.

The CEQ regulations (40 CFR 1501.3, 1501.4 and 1508.9) specify that, unless the project falls into a predetermined category under the lead agency's internal NEPA procedures, the preliminary question of significance is to be addressed through the preparation of an "Environmental Assessment", or EA. The EA is a "concise public document" that must (1) "briefly provide sufficient evidence and analysis" for determining whether an EIS or a FONSI must be prepared, (2) aid the agency in complying with NEPA when no EIS is prepared, and (3) facilitate preparation of an EIR when one is necessary. The EA must also include "brief discussions" of the need for the proposed action, alternatives, environmental impacts of the proposal and the alternatives, and a listing of agencies and persons consulted.

In this case, the FMCSA has made a FONSI based on an EA.* This report presents a detailed critical review of that EA, demonstrating that the EA is both inadequate in terms of scope as well as fatally flawed in terms of the methodology used to assess the significance of the air quality impacts associated with the proposed actions. Because of the inadequacy of the EA, we conclude that the FONSI is incorrect with respect

* "Safety Oversight for Mexico-Domiciled Commercial Motor Carriers, Final Programmatic Environmental Assessment," Prepared by John A Volpe Transportation Systems Center, January 2002.

to air quality impacts and that, based on NEPA, a complete EIS must be prepared for the proposed action.

The specific flaws in the FMCSA EA include the following:

- Failing to assess the air quality impacts of the no action and proposed action alternatives over more than a single year or beyond 2002;
- Improperly assessing the air quality impacts of the no action and proposed action scenarios by comparing the associated increase in emissions to total nationwide emissions from trucks;
- Failing to account for emissions differences between Mexican-domiciled and U.S.-domiciled trucks that exist now and that will become even more significant in the future;
- Failing to assess the air quality impacts of increased emissions and increased ambient pollutant levels in those areas where the impacts of the no action and proposed action scenarios are likely to be greatest, which include many areas that currently do not comply with existing federal air quality requirements and are likely to be out of compliance with future federal requirements;
- Failing to consider increases in emissions of toxic air contaminants resulting from the no action or proposed action alternatives, particularly within the context of the increase in local emissions due to increased numbers of safety inspections; and
- Failing to assess the localized air quality impacts of increased numbers of safety inspections.

The overall impact of both the no action and proposed action alternatives will be to allow the substitution of higher-emitting Mexican-domiciled trucks for lower-emitting U.S.-domiciled trucks for freight-carrying in the United States. In addition, the alternatives have the potential to increase overall U.S. truck traffic. Based on the available data, this will present a particularly significant issue in those areas of the southwestern U.S. that currently violate and are likely to continue to violate current and future health-based federal National Ambient Air Quality Standards (NAAQS) applicable to ozone and fine PM.

Both the no action and proposed action alternatives are in direct conflict with federal law that requires compliance with the NAAQS by specific dates. Heavy-duty Diesel vehicles are widely recognized as contributing to high ambient levels of ozone and fine particulate matter and for that reason have been required to meet increasingly stringent and costly emission standards established by the U.S. EPA. Allowing higher-emitting Mexican-domiciled trucks that do not have to comply with the same emission standards as comparable U.S.-domiciled trucks will not only undercut the U.S. EPA standards but also promote the use of Mexican-domiciled trucks for hauling freight in the U.S.

In addition to the NEPA process, the U.S. EPA has promulgated conformity regulations (§51 and §93 of Title 40 Code of Federal Regulations) to assure that actions taken by the federal government are consistent with air quality goals in that they do not cause or contribute to any violation of a NAAQS in any area, or delay attainment with a NAAQS in any area. The FMSCA has not performed any conformity analyses for the current project despite the fact that the no action

and proposed action alternatives are very likely to lead to emission increases that exceed the threshold levels above which a conformity analysis would be required in many existing nonattainment areas.

BACKGROUND

Freight Transport and Truck Emissions

Most freight carried by trucks in the United States is transported by heavy-duty Diesel vehicles. In turn, most of the freight carried by heavy-duty Diesel vehicles is transported by trucks with gross vehicle weight ratings of more than 60,000 pounds,* which are referred to as Class 8b trucks in most air quality arenas. The pollutants emitted by these vehicles that are of greatest concern from an air quality perspective are oxides of nitrogen (NOx) and particulate matter (PM). Emissions of volatile organic compounds (VOC) from heavy-duty Diesel vehicles are also of some concern although emission levels are generally much lower than applicable emission standards.

It is expected that both the no action and proposed action scenarios considered by FMCSA will result in an immediate increase in the use of Mexican-domiciled Class 8b trucks in the United States outside of the existing border areas as indicated in the EA. In addition, the use of Mexican-domiciled trucks in the United States outside of border areas is expected to increase in the future.** It is also expected that the no action and proposed action scenarios will result in Mexican-domiciled vehicles being used to carry freight that is cur-

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* "Comprehensive Truck Size and Weight Study," U.S. Dept. of Transportation, August 2000.

** "NAFTA, Coordinated Operational Plan Needed to Ensure Mexican Trucks Compliance with U.S. Standards," U.S. GAO, December 2001.

rently being carried by U.S.-domiciled trucks and that it is possible that they may actually increase total truck traffic in the U.S. by reducing the costs associated with shipping freight by truck.***

If the emission levels of Mexican-domiciled trucks were equal to those of U.S.-domiciled vehicles in the past, present, and future, the only potential air quality impact associated with the no action and proposed action scenarios would be an increase in total truck traffic in the U.S. However, in general, emission levels of Mexican-domiciled trucks have not been, are not now, and will not be the same as those of U.S.-domiciled trucks for at least two reasons. First, as discussed in more detail later, the emission standards that have applied and will apply to Mexican-domiciled trucks are, in general, higher than those for comparable U.S.-domiciled trucks. Based on the best current information, it appears that there will be a large difference in NOx, PM, and VOC emission levels between new U.S. trucks and new Mexican trucks beginning in 2007 when stringent new U.S. emission standards and a U.S. nationwide requirement for production of ultra-low sulfur Diesel fuel begin to be phased in. Secondly, Mexican-domiciled trucks tend, on average, to be older than those domiciled in the U.S. This, coupled with the fact that older trucks have higher emissions than newer vehicles, again leads to a situation where even if all other things were equal, Mexican-domiciled trucks would have higher emissions than comparable U.S.-domiciled trucks.

*** "North American Trade and Transportation Corridors: Environmental Impacts and Mitigation Strategies," ICF Consulting, August 2001.

Based on the above, there are two air quality issues of concern with respect to the proposed action:

1. Higher emissions in the United States resulting from the operation of Mexican-domiciled trucks as replacements for U.S.-domiciled trucks, and
2. Higher emissions in the United States resulting from an increase in freight demand due to the lower costs associated with freight shipping with Mexican-domiciled trucks.

Although not properly addressed in the FMCSA EA, these issues are of concern both now as well as into the foreseeable future.

Relevant Air Quality Issues In the United States

In the United States, the federal government has established National Ambient Air Quality Standards (NAAQS) for a number of pollutants in order to protect public health. The NAAQS set exposure limits that are generally cast in terms of limits on the maximum concentration of pollutants that the public can be exposed to during some period of time. Compliance with the NAAQS is determined for relatively small geographical areas (rather than the United States as a whole) based on air quality monitoring data. Areas in which pollutant concentrations exceed those allowed are described as being in "nonattainment" with respect to the NAAQS.

With respect to the matter at hand—the EA for the proposed FMCSA action—potential adverse impacts on the ability of areas to achieve and maintain compliance with NAAQS for ambient ozone and fine particulate

matter (PM)* represent significant air quality issues. Ozone is formed by a complex series of reactions between HC and NOx in the presence of sunlight. It is a strong irritant to the lungs and eyes and at high concentrations causes shortness of breath and also aggravates asthma, emphysema, and other conditions. Fine PM can penetrate deep into the lungs where it becomes deposited, which causes and aggravates respiratory problems, decreases in lung function, and premature death. It should also be noted that there are two types of fine PM: (1) particles that are directly emitted from sources such as the exhaust of Diesel engines, and (2) so-called "secondary" particles that form in the atmosphere due to gas to particle conversion. NOx can be an important chemical species with respect to secondary particle formation.

It should also be noted that, although delayed by litigation, it appears that new NAAQS for both ozone and fine PM (in this case $PM_{2.5}$) will be enforced by the U.S. EPA. These new NAAQS are considered to be more stringent than the existing NAAQS for ozone and fine PM (PM_{10}). There are different degrees of "nonattainment" with the NAAQS that have been established. For the current one-hour ozone NAAQS, in order of increasing nonattainment, these are marginal, moderate, serious, severe, and extreme. For the current one-hour PM_{10} NAAQS, the categories are moderate and serious.

States in which nonattainment areas are located are required pursuant to federal law to develop plans that

* Particulate matter is generally characterized in terms of particle diameter, with PM_{10} referring to particulate matter with diameters of 10 microns or less and $PM_{2.5}$ referring to particulate matter with diameters of 2.5 microns or less.

specify the actions that will be taken to reduce pollutant levels to the degree required to comply with the NAAQS prior to deadlines specified by federal law. Once compliance with the NAAQS is achieved, additional plans are required under federal law that specify the actions that will be taken to control emissions so that compliance with the NAAQS will be maintained in the future. Failure to come into compliance with NAAQS by the required deadlines and to maintain compliance can lead to the imposition of economic sanctions by the federal government and, in some cases, intervention by the federal government that involves the development and enforcement of a plan to bring the area into compliance.

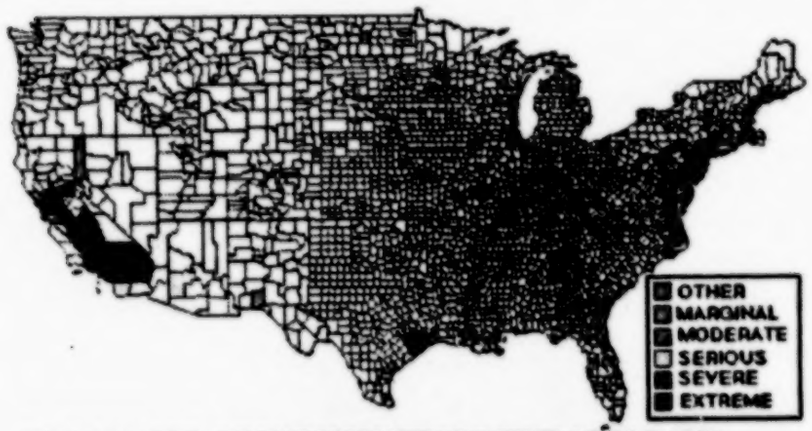
In addition to the legal requirements regarding the attainment of the NAAQS in given areas, there are legal requirements that compel federal government agencies to assess the impact of their actions on emissions levels in areas where there are currently or have been violations of the NAAQS. These requirements are referred to as "conformity" and the applicable provisions with respect to the no action and proposed action scenarios are found in §51 and 93 of Title 40, Code of Federal Regulations. As set forth in those sections, a conformity analysis may be required if the emission increases associated with an action equal or exceed the values shown in Table 1.

Currently, there are a number of areas of the country that are in nonattainment for either or both the ozone and PM_{10} NAAQS. These areas are shown in Figures 1 and 2 for ozone and PM_{10}, respectfully. All areas of the U.S. are required to come into attainment with the current ozone standard by 2010 and no later than 2007 (considering possible extensions) for PM_{10}.

Table 1
Selected Emission Increases Associated with Federal Actions That Trigger Conformity Requirements
(levels not to be equaled or exceeded)

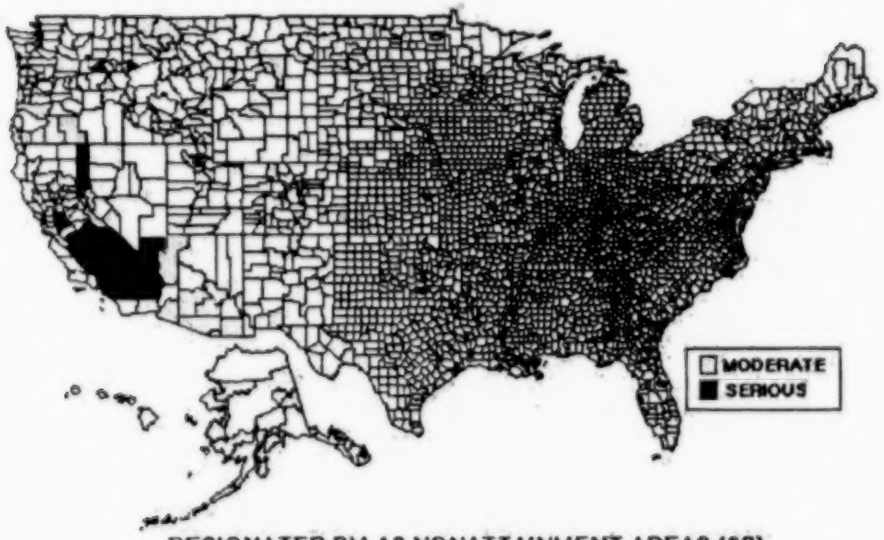
NAAQS/Area Designation	Pollutant	Emission Increase (tons per year/(tons per day))
Ozone/Extreme	VOC or NOx	10/(0.03)
Ozone/Severe	VOC or NOx	25/(0.07)
Ozone/Serious	VOC or NOx	50/(0.14)
Ozone/Other with Transport	VOC	50/(0.14)
Ozone/Other with Transport	NOx	100/(0.27)
Ozone/Other without Transport	VOC or NOx	100/(0.27)
Ozone/Maintenance	NOx	100/(0.27)
Ozone/Maint. with Transport	VOC	50/(0.14)
Ozone/Maint. without Transport	VOC	100/(0.27)
PM_{10}/Serious	PM_{10}	70/(0.19)
PM_{10}/Moderate	PM_{10}	100/(0.27)
PM_{10}/Maintenance	PM_{10}	100/(0.27)

Figure 1
Identification of Nonattainment Areas for the 1-Hour Ozone Standard



As shown in Figure 1, many urban areas in the Southwestern U.S.—including the San Diego, Los Angeles, and Central Valley areas of California, Phoenix, Arizona; and Houston, Dallas, and El Paso, Texas—are currently in nonattainment with the existing ozone NAAQS. Similarly, Figure 2 shows that many of these areas and others are also in nonattainment with the current PM_{10} NAAQS.

Figure 2
Current Nonattainment Areas for PM_{10} Standard



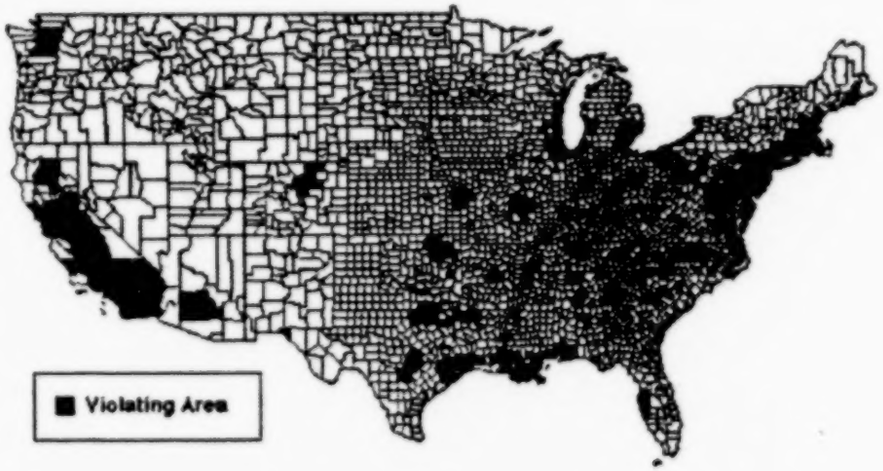
DESIGNATED PM-10 NONATTAINMENT AREAS (68)
UNDER CLEAN AIR ACT AMENDMENTS OF 1990
AS OF JANUARY 15, 2002

Source: Based upon U.S. EPA data interpreted by A.S.L. & Associates, Helena, MT
1/2002

Source: A.S.L. & Associates, Helena, Montana USA

Similar figures showing likely nonattainment areas for the new federal ozone and $PM_{2.5}$ NAAQS are shown in Figures 3 and 4, respectively. As shown in Figures 3 and 4, these and more areas are projected to be in nonattainment with the new ozone and $PM_{2.5}$ NAAQS when the U.S. EPA make formal determinations. Compliance deadlines with the new standards have not yet been set, although they are sure to extend beyond the deadlines for the current NAAQS.

Figure 3
Identification of Counties that May Violate the 8-Hour Ozone Standard
(Based on 1998-2000 Data*)



PROJECTED VIOLATION AREAS FOR THE 8-HOUR OZONE STANDARD
(1998-2000)

Source: Based upon U.S. EPA data interpreted by A.S.L. & Associates, Helena, MT
7/2001

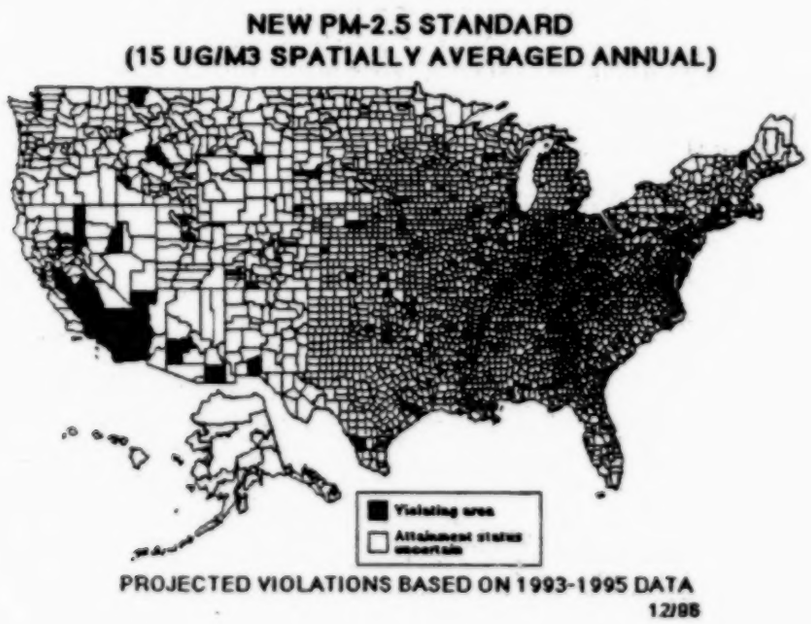
Figure 5 depicts the expected U.S. freight corridors for U.S./Mexico truck traffic resulting from NAFTA as projected by the U.S. Federal Highway Administration for 2020. As seen by comparing this figure with the nonattainment area maps in Figures 1-4, major freight routes, where the amount of freight carried by Mexican-domiciled trucks may increase substantially, pass directly through many of the areas that are and will be in nonattainment of the ozone and fine PM NAAQS. Similar data for 1996 also show the same major freight routes for U.S./Mexico truck traffic.*

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*McCray, J.P., and Harrison, R., "NAFTA Trucks on U.S. Highway Corridors", Presented at the 78th Annual Meeting of the Transportation Research Board, Washington, D.C., January 14, 1999.

In addition to the NAAQS, the U.S. EPA also states in the preamble to the 2007 standards that it believes that Diesel exhaust "is likely to be carcinogenic in humans by inhalation" and notes that reductions in fine PM emissions along with emissions of the Toxic Air Contaminants (TACs) benzene, 1,3-butadiene, formaldehyde, and acetaldehyde resulting from the 2007 standards will reduce public exposure to this hazard.

Figure 4
Possible Nonattainment Areas for Spatially Averaged $PM_{2.5}$ 15 ug/m3 Annual Standard 1993-1995



As Mexican-domiciled trucks will not be subject to the same standards as U.S.-domiciled trucks, absent changes in Mexican requirements, they will present a great toxics risk.

Finally, it should be noted that the state of California has established its own ambient air quality standards, which are in general more stringent than the federal NAAQS. The California Air Resources Board (CARB) is charged with reducing emissions sufficiently to attain both the federal and state standards. This is a difficult challenge as evidenced by CARB's recent release of a comprehensive Clean Air Plan* that indicates that the agency will be required to adopt increasingly costly emission reduction measures in order to achieve its goals. Increase in emissions associated with the operating of Mexican-domiciled trucks in California will hinder the state's ability to achieve those goals and require the adoption of even more costly measures than would otherwise be necessary.

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* California Air Resources Board, Proposed "Clean Air Plan: Strategies for a Healthy Future, 2002 to 2020," March 15, 2002.

Figure 5
NAFTA—US/Mexico Truck Traffic on US Highway Network in 2020



Source: Federal Highway Administration, Office of Freight Management and Operations

Implications

As outline above, many areas in the Southwestern and Southern United States currently violate and are likely to continue to violate health-based federal NAAQS applicable to ozone and fine PM. Federal law requires those areas to develop plans for reducing emissions to lower ambient concentrations of these pollutants and to

come into compliance with the NAAQS by specific dates. Heavy-duty Diesel vehicles are widely recognized as contributing to high ambient levels of ozone and fine particulate matter and for that reason have been required to meet increasingly stringent emission standards established by the U.S. EPA. In addition, in light of this fact, the U.S. EPA recently adopted dramatically more stringent emission standards for Diesel vehicles and specifications for Diesel fuel to enable compliance with those standards, specifically to aid area such as these in their quest to comply with the NAAQS.*

Now, in almost diametric opinion to the above, the federal government is proposing an action that may result in the operation of large numbers of higher-emitting Mexican-domiciled Diesel trucks operating in nonattainment areas. This clearly undercuts the recent U.S. EPA rulemaking and will make compliance with the NAAQS more difficult than it would otherwise be (or perhaps impossible) for those areas. Further, the FMCSA EA upon which the FONSI with respect to air quality is based either ignores or improperly addresses these issues.

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* Federal Register, Vol. 66, No. 12,5002-5193, January 18, 2001.

CRITICAL REVIEW OF FMCSA EA

Summary of FMCSA EA

The air quality related portion of the FMCSA EA is found on pages 3-9 through 3-12 of Section 3 entitled "Affected Environment" and on pages 4-14 through 4-24 of Section 4 entitled "Environmental Consequences," with additional details presented in Appendix C.

In Section 3, the EA recognizes the NAAQS and the air quality planning process for nonattainment areas (including the related transportation planning requirements), and notes that some of the counties directly on the Mexican border and in the location of the busiest border crossings are in nonattainment with either the current ozone or PM NAAQS or both.

The EA also notes correctly both that mobile sources make a significant contribution to total emissions of VOC, NOx, and PM emissions and that heavy-duty Diesel vehicles are of concern from an air quality perspective primarily because they emit substantial amounts of NOx and PM.

In Section 4, the potential impacts of the proposed action on air quality are addressed. The basic methodology employed in the EA compares emissions from Mexican-domiciled vehicles operating in the U.S. in 2002 under each scenario to total U.S. emissions from *all on-road vehicles in the U.S.* and then to *total emissions from all sources in the U.S.* based on data developed by the U.S. EPA for 1999. Emissions of Mexican-domiciled vehicles were assumed to be equal to those of U.S.-domiciled vehicles. The numbers of Mexican-domiciled vehicles assumed to be operating in the U.S. under each scenario during 2002 were estimated by

FMCSA. These estimates indicate that on the order of 30,000 Mexican-domiciled trucks will begin to operate inside the U.S. beyond the current border areas in 2002 alone.

Emissions associated with proposed safety inspections of Mexican-domiciled vehicles are estimated separately for 2002 using the U.S. EPA MOBILE5b and PART5 emission factor models and are also compared to total U.S. emissions in 1999. Again, estimates of the numbers of vehicles tested and the characteristics of those inspections were developed by FMCSA and are not documented in the EA. In addition, emissions from Mexican trucks were apparently assumed to be the same as comparable U.S. trucks although it appears that the older age of Mexican-domiciled vehicles was taken into account to some degree in this limited section of the EA air quality impacts analysis.

Flawed Air Quality Analysis Methodology

The air quality analysis methodology used in the EA is fatally flawed due to a number of serious methodological deficiencies and the use of a number of erroneous assumptions. As a result, the methodology used in the EA is completely inappropriate for assessing the air quality impacts of the no action and proposed action scenarios. Because the air quality analysis is fatally flawed, the FONSI with respect to air quality is inappropriate because it is not supported.

The fundamental flaws with the air quality analysis contained in the EA include the following:

1. Failure to consider impacts in the proper geographical regions;
2. Failure to consider impacts over the proper time horizon;
3. Failure to account for differences in emissions between Mexican- and U.S.-domiciled trucks;
4. Failure to consider impacts of emissions of toxic air contaminants (TACs); and
5. Failure to properly assess the impacts on air quality.

The nature and import of these flaws are outlined below and should be addressed through an EIS. In addition, an assessment of the potential emission impacts of the no action and proposed action alternatives indicates that those impacts generally exceed the thresholds beyond which transportation conformity analysis requirements are triggered for affected nonattainment and maintenance areas.

Inappropriate Analysis Areas

The FMCSA EA evaluates the emission impacts of the no action and proposed action scenarios in light of annual nationwide emissions from on-road trucks. This approach is invalid and the results are meaningless with respect to the assessment of the significance of air quality impacts.

Air quality issues, including ozone and fine PM concentrations, are usually evaluated for relatively small geographical areas. For example, attainment and nonattainment designations with respect to the various

NAAQS may be areas that represent only a portion of a single county. The reason for this is that local air quality particularly is determined primarily by local emissions and local meteorological conditions.

As shown previously in Figure 5 and the maps in Figures 1–4, the impacts of the no action and proposed action alternatives are likely to occur along major trucking corridors that pass through areas that are not in attainment with the current and future ozone and fine PM NAAQS. It is in these areas where the assessment of impacts needs to be performed. Obviously, even if an increase in emissions that represents only a small fraction of nationwide emissions occurs in an localized area with pre-existing air quality problems —such as San Diego, El Paso, Houston, or Dallas—that increase could either prevent or substantially delay attainment with the NAAQS.

The magnitude of the potential impacts of Mexican-domiciled trucks must be investigated in each of the major urban areas in the Southwest that are currently in nonattainment with ozone and PM NAAQS as well as those likely to be in nonattainment with the new ozone and fine PM standards and those where maintenance plans are in effect. In addition, analyses may need to be performed for other nonattainment areas that are much further from the border, including Baton Rouge, St. Louis, and potentially the major urban areas of the eastern seaboard. Again, it should also be noted that the purpose of U.S. EPA conformity requirements that apply in localized areas is to ensure that federal actions such as this do not result in the exceedance of delayed compliance with applicable NAAQS.

Inappropriate Analysis Period

The EA analyzes the impact of the no action and proposed action alternatives for only a single year—2002. No explanation is provided for why this is appropriate or how an analysis performed for only a single year is satisfactory to assess the impacts of the alternatives that will extend into the future and will change over time. As noted previously, the areas that may be adversely affected by the alternatives must come into compliance with current federal air quality standards late in this decade and with future standards probably sometime during the next decade. Therefore, the analysis should be carried out over a much longer period, in our opinion through at least 2020.

As shown above, Mexican-domiciled trucks will have higher emissions than U.S.-domiciled trucks, with the differences in emissions increasing over time. This fact must be taken into account in the EA. Further, it is clear from Section 3 of the EA that Mexican imports and northbound border crossings of trucks from Mexico are increasing over time. Further, the FHWA data shown in Figure 5 incorporate an estimated 3.4% annual increase in freight traffic into and out of Mexico from the U.S. in developing the estimates for 2020. This means that even without a shift in freight from U.S.- to Mexican-domiciled trucks, there will be greater numbers of the latter operating in the U.S. in the future.

It is also likely that there will be a shift in freight from U.S.- to Mexican-domiciled trucks that will further in

crease their operation in the U.S. over time. There are several reasons for this, including the following:

1. New Mexican trucks will likely be less expensive to purchase and operate than comparable new U.S. trucks because they will not be required to certify to the same stringent emission standards (which require the use of expensive aftertreatment devices) and will not suffer the associated fuel economy penalties; and

2. The ability of U.S. trucks designed to comply with the 2007 U.S. EPA standards and to operate on ultra-low sulfur Diesel fuel will likely be limited (because of the required after treatment devices) if that fuel is not available in Mexico, as engine manufacturers probably will not honor warranties for vehicles that have been misfueled with higher sulfur Diesel fuels.

Therefore, any assessment of the actual operation of Mexican-domiciled trucks operating in the U.S. needs to consider both the short- and long-term impacts since there are likely to be significant changes in the amount of freight traffic handled by Mexican trucks operating in the U.S. over time. Again, the existing EA completely ignores this significant issue.

Differences In Emission Rates of Mexican- and U.S.-Domiciled Class8b Trucks

The EA assumes that the amount of emissions that results from the per-mile operation of Mexican- and U.S.-domiciled trucks is the same. This assumption is incorrect for two reasons. First, for a given model year, the U.S. truck will have been required, in general, to meet more stringent emissions standards. Second,

based on available data, the average Mexican truck is older than the average U.S. truck and, again in general, will have higher emissions regardless of its state of repair because older trucks are certified to less stringent emission standards.

Dealing first with the issue of different emission rates and standards, Table 2 shows how, on the basis of emissions, Mexican-domiciled trucks translate to U.S.-domiciled trucks as a function of model year. The development of this table and the sources of information are described in detail in Appendix A, along with all required assumptions.

The data in Table 2 were then used in combination with the latest versions of the U.S. EPA (MOBILE6 and PART5) and California Air Resources Board (EMFAC 2001) emission models.* assuming that the vehicles operated in the Houston or San Diego areas, respectively, to generate gram per mile traveled emission rates for the average Mexican-

* The MOBILE/PART and EMFAC emissions models have been developed by the U.S. EPA and CARB explicitly for estimating current and future year emissions from on-road vehicles and are required to be used in the preparation of air quality plans for California areas (EMFAC) and other areas of the country (MOBILE/PART). They are also used to evaluate the impact of proposed emission control measures.

Table 2
Emissions Equivalency Between Mexican- and U.S.-Domiciled Heavy-Duty Diesel Vehicles as a Function of Model Year

Mexican Truck Model Year(s)	Equivalent U.S. Truck Model Year(s) for Emissions
1966-1969	1966
1970-1972	1968
1973-1974	1971
1975-196	1973
1977-1978	1975
1979-1980	1977
1981-1982	1979
1983	1980
1984-1985	1981
1986	1982
1987-1988	1983
1989-1990	1986
1991	1988
1992	1989
1993-2003	1993-2003
2004+	2003

and U.S.-domiciled class8b heavy-duty Diesel trucks. Rates were calculated for 2000, 2002, 2007, 2010, 2015, and 2020. As shown in Tables 3 and 4, the composite emission rates for U.S.-domiciled trucks are lower in all years using both models.

The data presented in Tables 3 and 4 do not consider differences in the average age of Mexican- domiciled trucks versus U.S.-domiciled trucks. Data regarding the differences in the ages of the two fleets were developed for use in estimating emissions of Mexican

trucks from a "Mexicanized" version of the U.S. EPA MOBILE5 model prepared by Radian International under contract to the Western Governor's Association.*

Those data were used in combination with the data and models used to develop the information presented in Tables 3 and 4 to estimate the combined impact of different emission standards and older average ages on the relative per-mile emissions of Mexican-

* "Mexico Emissions Inventory Program Manuals, Volume VI, Motive Vehicle Inventory Development," Radian International, May 17, 1996.

Table 3
Comparison of Per-Mile Emission Rates of Mexican- and U.S.-Domiciled Class8b Heavy-Duty Diesel Vehicles Accounting for Different Emission Standards Using MOBILE6/PART5

Year	Emission Rates (grams per mile of operation)							
	NOx		$PM_{2.5}$		PM_{10}		VOC	
	Mexican	U.S.	Mexican	U.S.	Mexican	U.S.	Mexican	U.S.
2000	25.70	25.45	0.66	0.56	0.73	0.62	1.29	1.05
2002	22.96	21.65	0.54	0.47	0.59	0.51	1.07	0.90
2007	16.69	13.00	0.34	0.31	0.38	0.34	0.72	0.60
2010	14.95	9.39	0.29	0.19	0.31	0.21	0.67	0.49
2015	13.46	4.45	0.23	0.08	0.25	0.09	0.61	0.37
2020	12.80	2.18	0.21	0.05	0.23	0.05	0.60	0.33

Table 4
Comparison of Per-Mile Emission Rates of Mexican- and U.S.-Domiciled Class8b Heavy-Duty Diesel Vehicles Accounting for Different Emission Standards Using EMFAC2001 for San Diego

Year	Emission Rates (grams per mile of operation)							
	NOx		$PM_{2.5}$		PM_{10}		VOC	
	Mexican	U.S.	Mexican	U.S.	Mexican	U.S.	Mexican	U.S.
2000	21.53	19.13	0.58	0.45	0.63	0.48	1.34	0.96
2002	19.91	18.06	0.49	0.38	0.53	0.41	1.17	0.87
2007	16.60	12.83	0.29	0.23	0.32	0.26	0.81	0.63
2010	15.05	9.31	0.22	0.15	0.24	0.16	0.66	0.48
2015	13.89	5.23	0.18	0.08	0.19	0.09	0.56	0.32
2020	13.48	3.32	0.17	0.04	0.18	0.05	0.55	0.25

and U.S.-domiciled class8b trucks. The results are shown in Tables 5 and 6. As shown, the difference in average emission rates between the two fleets of vehicles becomes larger when both the effect of differences in emission rates and standards as well as the average age of the fleet are taken into account.

Additional details regarding the development of data presented in Tables 3-6 can be found in Appendix A.

Table 5
Comparison of Per-Mile Emission Rates of Mexican- and U.S.-Domiciled Class8b Heavy-Duty Diesel Vehicles Accounting for Both Different Emission Standards and Differences in Average Vehicle Age Using MOBILE6/PART5

Year	Emission Rates (grams per mile of operation)							
	NOx		$PM_{2.5}$		PM_{10}		VOC	
	Mexican	U.S.	Mexican	U.S.	Mexican	U.S.	Mexican	U.S.
2000	31.54	25.45	1.49	0.56	1.63	0.62	3.33	1.05
2002	29.23	21.64	1.35	0.47	1.48	0.51	2.67	0.90
2007	24.62	13.00	0.82	0.31	0.90	0.34	1.34	0.60
2010	22.47	9.39	0.58	0.19	0.64	0.21	1.04	0.49
2015	18.03	4.45	0.29	0.08	0.32	0.09	0.71	0.37
2020	14.68	2.18	0.21	0.05	0.23	0.05	0.68	0.33

Table 6
Comparison of Per-Mile Emission Rates of Mexican- and U.S.-Domiciled Class8b Heavy-Duty Diesel Vehicles Accounting for Both Different Emission Standards and Differences in Average Vehicle Age Using EMFAC2001

Year	Emission Rates (grams per mile of operation)							
	NOx		$PM_{2.5}$		PM_{10}		VOC	
	Mexican	U.S.	Mexican	U.S.	Mexican	U.S.	Mexican	U.S.
2000	24.86	19.13	0.84	0.45	0.92	0.48	2.01	0.96
2002	23.16	18.06	0.72	0.38	0.78	0.41	1.77	0.87
2007	20.42	12.83	0.46	0.23	0.50	0.26	1.34	0.63
2010	18.30	9.31	0.33	0.15	0.36	0.16	1.08	0.48
2015	16.11	5.23	0.22	0.08	0.24	0.09	0.90	0.32
2020	14.43	3.32	0.18	0.04	0.20	0.05	0.78	0.25

Focusing on NOx and PM emissions, the impact of the operation of Mexican-domiciled trucks in the U.S. can be seen in Figures 6 and 7 in terms of the ratio of their emissions on a per-mile basis to those of U.S.-domiciled trucks. Figure 6 shows the ratio of Mexican-

Figure 6

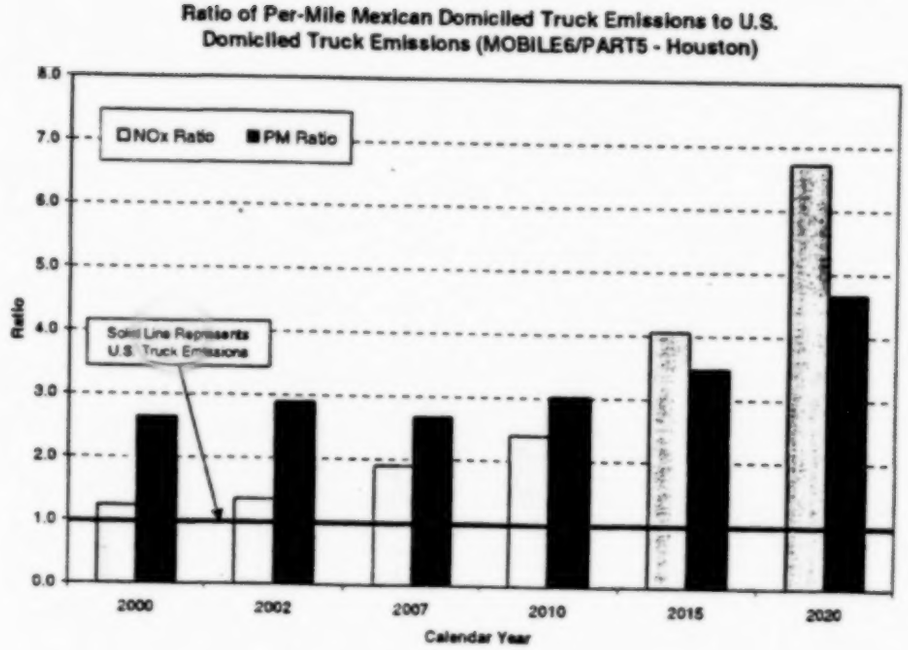
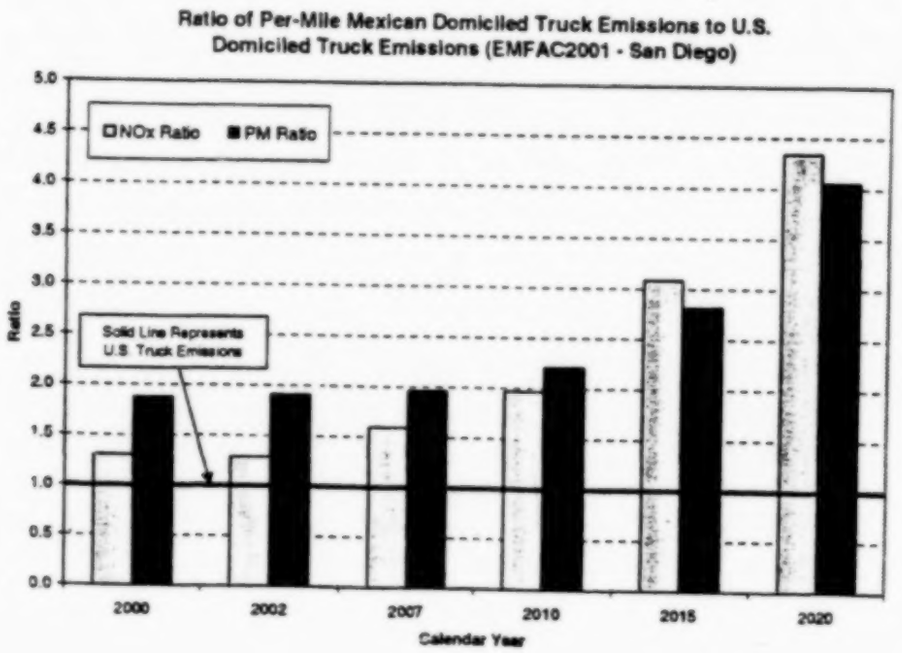


Figure 9Figure 7



domiciled truck emissions to U.S. truck emissions for NOx and PM for the fleets in operation from calendar year 2000 to 2020 as estimated using the U.S. EPA MOBILE6/PART5 models and the data described above. In the figure, a ratio of one means that Mexican-domiciled truck emissions are exactly equal to those of U.S.-domiciled trucks while ratios greater than one indicate higher emissions from the Mexican trucks. As shown in Figure 6, Mexican-domiciled trucks will have higher NO_x and PM emissions than U.S. trucks over the entire 20-year period examined. In 2007, the year that Houston is required to attain the ozone NAAQS, emissions of NO_x and PM for each mile of travel by Mexican trucks will be equivalent to 1.9 and 2.7 miles, respectively, of travel by U.S. trucks. Further, this emissions differential will grow dramatically from 2010 to 2020. Figure 7 shows that similar results are obtained when the issue is examined using California's EMFAC2001 emission model and data for the San Diego area.

Failure to Consider Toxic Air Contaminant Impacts

Emissions of TAC from heavy-duty Diesel vehicles are also a major concern. TACs that are emitted by Diesel vehicles include directly emitted Diesel PM, benzene, 1,3-butadiene, formaldehyde, and acetaldehyde. These latter four compounds represent a subset of VOC emissions. The magnitude of the concern posed currently by Diesel vehicles is illustrated in a recent study performed by the South Coast Air Quality Management District.* In that study, it was reported that Diesel PM emissions accounted for about 71% of the total risk associated with exposure to all TACs in southern California, with the other four TACs (which are also emitted by gasoline vehicles) accounting for the bulk of the remaining risk.

* Multiple Air Toxic Exposure Study (MATES-II), South Coast Air Quality Management District, March 2000.

As shown above, Mexican-domiciled trucks will have substantially higher PM emissions than U.S.-domiciled trucks and that difference in emissions will increase over time. As indicated by the data in Tables 5 and 6, the ratio of Mexican-domiciled truck VOC emissions to U.S.-domiciled truck VOC emissions ranges from about 1.5 to 2.5, meaning that the Mexican trucks emit approximately that much more of these TACs than do U.S. trucks.

The FMCSA EA fails to address the issue of increased emissions of TACs due to the no action or proposed action scenarios in any way. Emissions of TACs will clearly increase as a result. Given this, the impacts of the no action and proposed action alternatives on TAC emissions and ambient TAC levels need to addressed. This again is another area where the no action and proposed action alternatives run directly counter to the recent EPA rulemaking setting stringent standards for heavy-duty Diesel vehicles, which were intended in part to reduce public exposure to TACs.

Failure to Properly Assess the Impacts on Air Quality in Specific Areas and to Perform Transportation Conformity Analyses

As noted above, the air quality impacts associated with the no action and proposed action alternatives must be considered in those nonattainment areas where they will actually occur. In addition, the potential emission increases associated with the alternatives need to be compared to the conformity thresholds in Table 1; if

those thresholds are exceeded, a conformity analyses may be required.

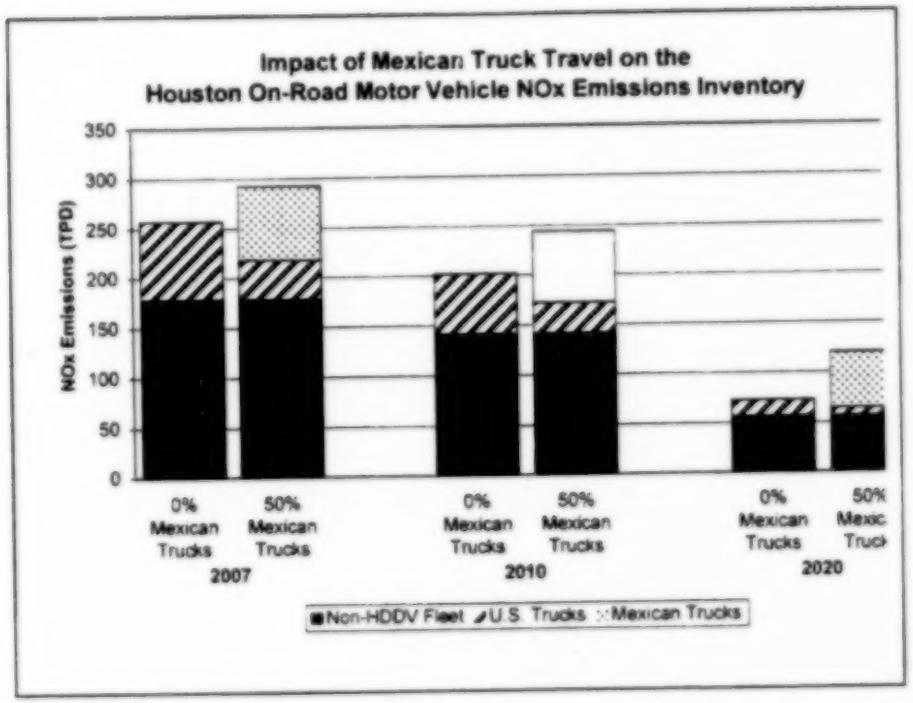
As an example of the impacts that Mexican-domiciled trucks could have in the near term, we evaluated the effects associated with a 50% replacement of U.S. trucks by Mexican trucks on NOx and PM_{10} emissions occurring in three ozone nonattainment areas. This value has been used in previous analyses of the impacts of lifting the current restrictions on Mexican-domiciled truck operation in the U.S* as a reasonable estimate of the amount of U.S. domiciled-truck activity that could be replaced in the long term by Mexican-domiciled trucks in urban areas near the Mexican-U.S. Border. (That there could be significant NAFTA-related truck travel through these urban areas is, again, demonstrated by Figure 5.) It should also be noted that in this analysis the impacts of Mexican-domiciled trucks on NOx and PM_{10} emissions are linearly proportional to the assumed percentage displacement of U.S.-domiciled truck activity. Additional details regarding this analysis are presented below and contained in Appendix A.

The first area analyzed was Houston, Texas, which is a severe ozone nonattainment area and is in compliance with the NAAQS for PM_{10}. NOx and PM_{10} impacts were evaluated for 2007 (the year that Houston must come into compliance with the ozone NAAQS), 2010, and 2020 using MOBILE6/PART5 relative to total emissions of these pollutants from the on-road vehicle fleet. As shown in Figure 8, using the assumptions stated above, the operation of Mexican-domiciled trucks in the Houston area would increase NOx emissions by about 35 tons per day in 2007, 42 tons per day in 2010, and 48 tons per day by 2020 relative to a baseline where only U.S.-domiciled trucks were in operation in the area. In addition, NO_x emissions from Mexican-domiciled trucks would account for an ever-increasing fraction of the total on-road NO_x inventory in the area and account for about 40% of the inventory by 2020.

* "North American Trade and Transportation Corridors: Environmental Impacts and Mitigation Strategies," ICF Consulting, August 2001.

The NO_x increases shown in Figure 8 should be compared to the 0.07 ton per day conformity threshold value for NO_x emissions in severe ozone nonattianment areas presented in Table 1. For the scenario analyzed, this threshold is exceeded by 500 times (35 tons per day/0.07 tons per day). To put these numbers in a slightly different perspective, in order to fall under the conformity threshold, Mexican-domiciled trucks would have to account for no more than 0.1% of heavy-duty truck operation in the Houston area in 2007 (50% of truck operation divided by a 500 times reduction in NO_x emissions required to fall below the threshold in 2007) and smaller fractions in later years.

Figure 8



A similar comparison for PM_{10} emissions is presented in Figure 9. As shown, direct PM_{10} emissions from on-road mobile sources in the Houston area will be increased by 1.7 tons per day in 2007 by the operation of Mexican-domiciled trucks based on the stated assumptions, with that value declining to about 0.7 tons per day in 2020. These values should be compared to the conformity threshold level of 0.27 tons per day for areas

maintaining compliance with the PM_{10} NAAQS. Again, the conformity threshold is greatly exceeded by the estimated emissions increase due to Mexican-domiciled trucks.

The second area analyzed was San Diego, which is a serious ozone nonattainment area and is in attainment with the current PM_{10} standards. The same assumptions noted above were again used in combination with the EMFAC2001 model. Figure 10 shows NOx impacts for 2007, 2010, and 2020. As shown, the results are similar to those observed for Houston, with the increase in NO_x emissions due to the assumed operation of Mexican-domiciled trucks growing from about 8 tons per day in 2007 to about 15 tons per day in 2020. These NOx increases offset a substantial portion of the reductions that would be realized from the control of NOx emissions from U.S. domiciled trucks. Even the 8 ton per day value exceeds the 0.14 ton per day conformity analysis threshold by a factor of approximately 50. This means that in order for the threshold not be exceeded, Mexican domiciled trucks would have to account for 1% or less of truck operation in the San Diego area (50% of operation divided by a 50 times reduction required in NOx emissions).

Figure 9

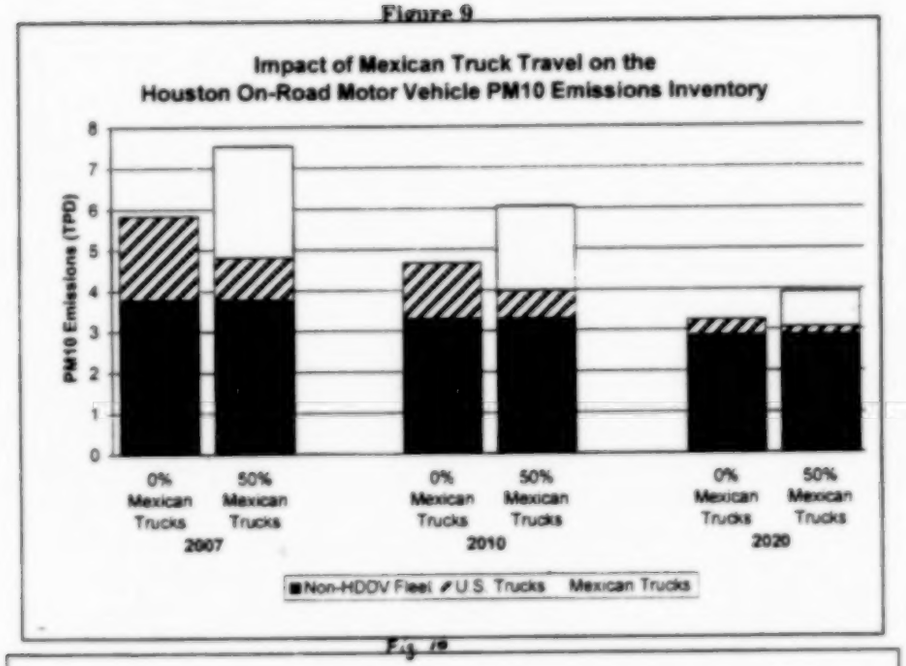
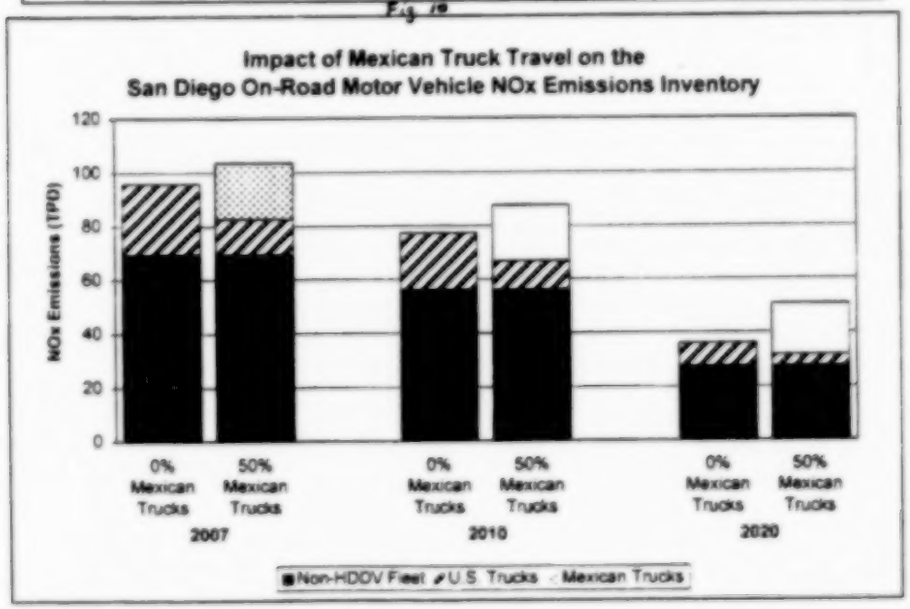
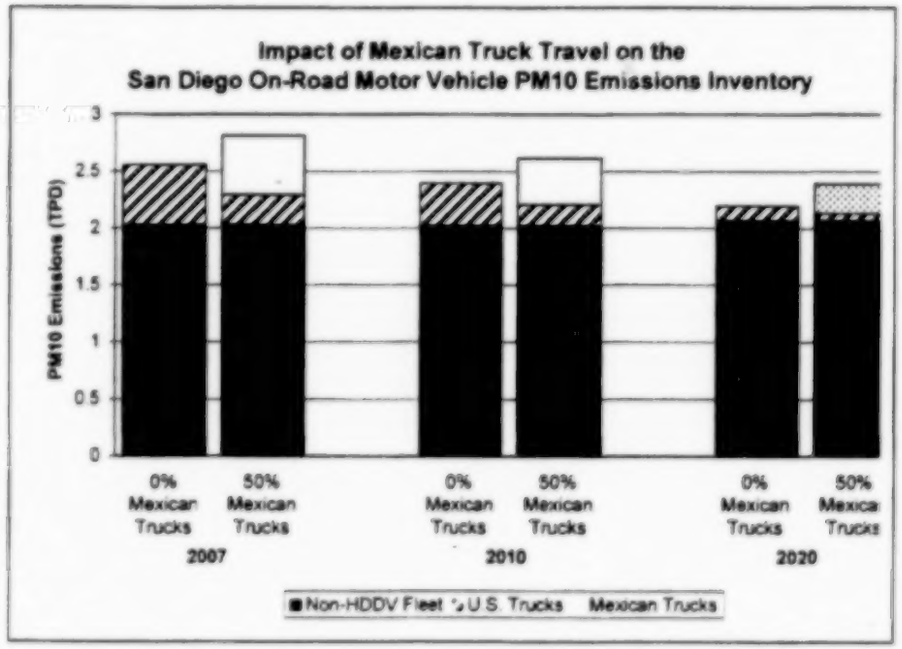


Fig 10



PM_{10} emission impacts for San Diego are shown in Figure 11. Again, they are similar to those observed for Houston but in this case do not exceed the conformity threshold of 0.27 tons per day that applies for areas maintaining compliance with the current PM10 NAAQs.

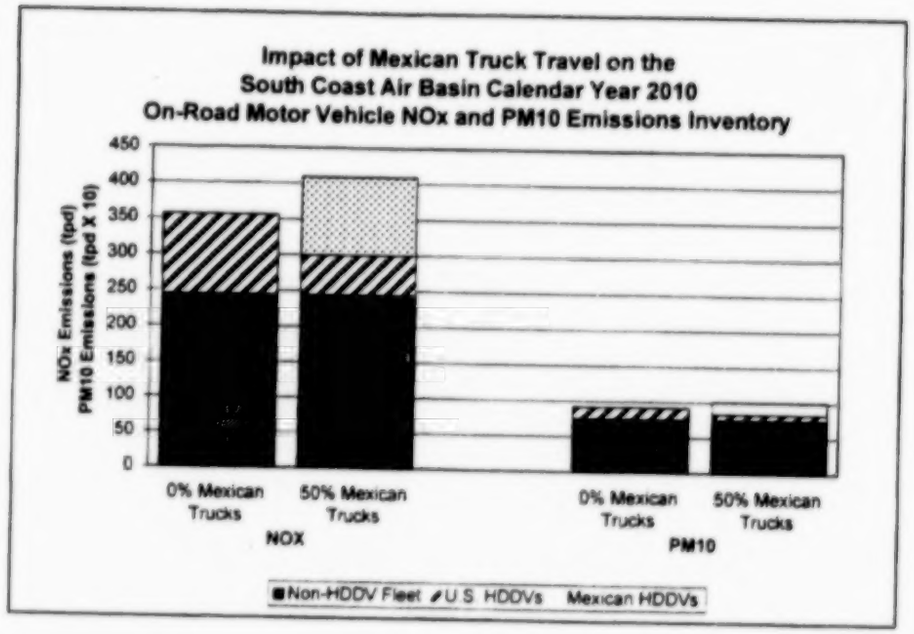
Figure 11



Finally, because it is currently the only extreme ozone nonattainment area in the U.S. as well as a serious PM_{10}

nonattainment area, results are presented for the South Coast Air Basin for 2010, the year that this area must come into compliance with the ozone NAAQS. The results are presented in Figure 12 for NO_x and PM_{10}. As shown, for the scenario analyzed, NO_x emissions would be increased by more than 50 tons per day. Comparing this value to the 0.03 ton per day conformity threshold from Table 1 shows that the emissions impact of this scenario exceeds the conformity threshold by a factor of approximately 1,700. It also indicates that if the impact of Mexican truck operations is to fall below the conformity threshold, Mexican trucks can account for only 0.03% (50% operation divided by a required reduction of 1,700 times) of heavy-duty truck operations in the South Coast Air Basin in 2010. Similarly, direct PM_{10} emissions in 2010 would be increased by about 1.2 tons per day compared to the conformity threshold of 0.19 tons per day.

Figure 12



It should be noted, for all of the examples presented above, that the estimated PM increases do not account for the impact of higher NOx emissions and other factors associated with Mexican-domiciled truck operation on secondary PM levels.

In addition to the above, the impact of increased Diesel emissions due to an increase in the number of safety inspections needs to be examined on a highly localized basis that includes the inspection site itself and the area immediately surrounding the inspection site. Such analyses are routinely performed in response to local, state, and federal requirements for projects ranging

from street widening to the construction of parking garages and new truck terminals and focus in particular on exposures to toxic emissions. No analysis of this type has been performed as part of the EA and, again, it is wholly inappropriate to compare the associated increase in emissions to total nationwide truck emissions for purposes of assessing the significance of impacts.

Appendix A

Estimating the Impacts of Mexican Truck Travel on Emissions from Heavy-Duty Diesel Vehicles in Houston and San Diego

The emissions impacts associated with increased Mexican truck traffic were quantified in terms of the increase in the mass of pollutants emitted per day, i.e., in units of tons per day (tpd). To calculate emissions from on-road motor vehicles, two parameters are generally needed:

- An emission factor (in grams of emissions per mile of vehicle travel, or g/mi), and
- The total number of miles traveled by the vehicles of interest.

By multiplying the g/mi emission factor by the number of vehicle miles traveled per day (mi/day), one obtains an estimate of the daily emissions associated with the vehicles operated in a given area.

For this analysis, it was necessary to generate separate emission factors for the Mexican vehicle fleet and the fleet of U.S.-based trucks operating in the Houston and San Diego areas. That is because the Mexican truck fleet is typically much older than the U.S. fleet, and it has been subject to less stringent emissions standards over the years. The discussion below describes how the emission factors were developed for the Houston fleet, the San Diego fleet, and for Mexican trucks operating in each of these areas. In addition, a sensitivity analysis was conducted for the South Coast Air Basin (SCAB) in California. The approach used for that analysis followed the San Diego analysis.

Emission Factors

The emission factors used in this analysis were derived from several different emission factor models. The California Air Resources Board (CARB) has its own emission factor model (EMFAC2001), which was used to generate the emission factors for the San Diego fleet. The remainder of the country uses the MOBILE6 and PART5 models, which were developed by the U.S. Environmental Protection Agency (EPA).* In addition, a Mexico-[A-2]specific model (MOBILE5-Mexico) was developed in 1996 by Radian International for the Western Governor's Association.* That model is based on an earlier version of MOBILE6 and incorporates model-year vehicle registration fractions (and resulting travel fractions) that are specific to the Mexican vehicle fleet. Since this model is a simplified version of MOBILE that has not been widely used or reviewed by industry professionals, Sierra did not use the model itself to generate emission factors for the Mexican fleet. Instead, as described below, the Mexico-specific travel fractions and some of the model-year-specific emission rate assumptions from the Mexican MOBILE model were applied to standard MOBILE6 model output and EMFAC2001 output to generate gram-per-mile

* Note that the California emissions model, EMFAC2001, estimates emissions of ROG, CO, NO_x, PM_{10}, and $PM_{2.5}$. On the other hand, EPA's MOBILE6 model estimates emissions of VOC, CO, and NO_x, while the PART5 model is used to estimate emissions of PM10 and $PM_{2.5}$.

* "Mexico Emissions Inventory Program Manuals: Volume VI - Motor Vehicle Inventory Development, Final," prepared by Radian International for the Western Governors' Association, Denver, Colorado, May 17, 1996.

emission factors for the Mexican heavy-duty Diesel vehicle (HDDV) fleet.

Houston-Area Emission Factors - EPA's MOBILE6 and PART5 models were used to generate emission factors for the U.S.-based fleet operating in the Houston area. These models were operated in their default modes, which assumes national average model-year registration distributions (i.e., the percentage of HDDVs within each model year).

Both models allow the user to select an optional model-year specific output format specifically for "Class 8B" heavy-duty Diesel vehicles. This output format was used to obtain individual g/mi emissions estimates, as well as travel fractions (i.e., the fraction of total HDDV mileage accumulated by each individual model year making up the fleet) for the 25 separate model years that are assumed to make up the in-use fleet. Composite emission factors for each calendar year analyzed are then calculated by multiplying each model-year travel fraction by its corresponding emission factor, then summing the total of these products. A sample calculation for NOx emissions in calendar year 2010 is shown in Table 1 for the MOBILE6 model.

Several points are worth noting with respect to the baseline MOBILE6 estimates contained in Table 1:

- Twenty-five different model years are assumed to make up the fleet, with newer vehicles contributing more to the total miles traveled than older vehicles (i.e., the travel fraction for newer vehicles is greater than it is for older vehicles). That is because there are more of newer vehicles in the fleet (older vehicles are

removed through attrition) and newer vehicles are typically driven more than older vehicles.

- The travel fraction and emission rate for model year 2010 is assumed to be zero in the example above. That is because the model was run for a January 1 basis, and new HDDV sales are assumed to begin on January 1 of the calendar year being analyzed. This is slightly different than the case for light-duty vehicles, in which new model year sales are assumed to being in October 1 of the previous calendar year.

Table 1

Sample calculation of Calendar Year 2010 HDDV Class 8B No_x Emission Rate Based on MOBILE6 (January Basis)

Model Year	Vehicle Age	Travel Fraction	Nox Emission Factor (g/mi)	TfxEF (g/mi)
2010	0	0.0000	0.000	0.000
2009	1	0.1529	3.478	0.532
2008	2	0.1296	3.554	0.461
2007	3	0.1100	3.623	0.398
2006	4	0.0932	6.805	0.634
2005	5	0.0790	6.890	0.544
2004	6	0.0670	6.966	0.467
2003	7	0.0568	7.916	0.450
2002	8	0.0482	11.420	0.550
2001	9	0.0408	16.287	0.664
2000	10	0.0346	16.339	0.566
1999	11	0.0293	16.386	0.481
1998	12	0.0249	18.787	0.468
1997	13	0.0211	20.299	0.429
1996	14	0.0178	20.109	0.359
1995	15	0.0152	20.720	0.315
1994	16	0.0129	20.726	0.266
1993	17	0.0109	28.889	0.315
1992	18	0.0092	30.170	0.278
1991	19	0.0078	24.473	0.192
1990	20	0.0066	22.855	0.152
1989	21	0.0057	28.471	0.161
1988	22	0.0048	27.679	0.132
1987	23	0.0041	26.477	0.108
1986	24	0.0175	26.477	0.464
Fleet-Average Emission Rate (=Sum of TF X EF):				9.39

Note that two adjustments were made to the $PM_{2.5}$ and PM_{10} emission factors generated by the PART5 model to reflect recently promulgated EPA rules that are not accounted for in the base version of that model: (1) a

90% reduction in HDDV exhaust PM emission rates was applied to 2007 and newer model year vehicles; and (2) the sulfate portion of the exhaust emission rate for pre-2007 model year vehicles was reduced to reflect low-sulfur Diesel fuel requirements (i.e., 15 ppm sulfur) that are implemented nationwide in 2007. Note that the NOx elements of the 2007 HDDV rule are incorporated in the base MOBILE6 model.

For the sake of consistency, the HDDV travel fractions generated with MOBILE6 were used to calculate the composite emission factors from both models. We chose to use the MOBILE6 travel fractions rather than those from PART5 because the MOBILE6 fractions are more current and are therefore a better representation of the in-use fleet.

San Diego Area Emission Factors - CARB's EMFAC 2001 model (version 2.07) was used to calculate the emission factors for the San Diego area. The model was run such that model-year-specific emissions were selected.* However, EMFAC2001 calculates emission factors for as many as 45 different model years, with 1965 being the oldest model year considered by the model. This fundamental difference in the modeling approaches for the MOBILE6 vs. EMFAC2001 models results in a slightly greater percentage of emissions assigned to higher-emitting, older vehicles in the EMFAC2001 result than in the MOBILE6 result. This effect is slightly offset by the fact that older vehicles do not travel as many miles per year, so the total gram-

* The output from EMFAC2001 is tons per day of pollutant. Because daily vehicle miles traveled are also reported in the model output, it was possible to divide the emissions estimates (in tons per day) by the daily VMT to arrive at a g/mi value for each model year considered by the model.

per-mile emission factors are comparable between the two models.

Inspection of the EMFAC2001 output showed that although the 2007 heavy-duty vehicle NOx standards recently adopted by both the EPA and CARB are reflected in the modeling results, the new 2007 PM standards are not. Starting in 2007, the PM certification standards are due to be reduced by 90%. To account for this apparent error in the base EMFAC2001 model, Sierra reduced the 2007 and newer model year EMFAC PM emission rates by 90%.

Mexican Fleet Emission Factors - As noted above, the Mexican MOBILE model is not widely used. Therefore, to generate model-year emission factors for the Mexican fleet, the model- year output from the MOBILE6, PART5, and EMFAC2001 models was modified to represent Mexican HDDVs via the application of a model-year mapping system. This mapping system essentially involves synchronizing the model-year Mexican HDDV emission standards and the U.S. model-year emission factors to which they most closely correlate. Mexico adopted its first HDDV standards in 1993 - standards identical to the Federal US HDDV standards already in place at that time. In addition, Mexico followed the US EPA's lead and adopted the more stringent PM10 and NOx standards which were required beginning in 1994 and 1998, respectively. The U.S. subsequently adopted even more stringent HDDV certification standards that go into effect in 2004 and 2007, but Mexico has not followed suit. Thus, it was assumed that the emissions from U.S. and Mexican trucks directly correlate for model years 1993 through 2003 (while their certification standards were identical) but that Mexican trucks sold

after 2003 have no better emissions than the equivalent of a U.S.-certified 2003 model year truck.

Such a mapping strategy was described in the Mexican MOBILE model documentation, but on close inspection did not appear to accurately reflect the Mexican fleet, as represented by the past and current Mexican certification standards. Therefore, Sierra has modified this mapping strategy as follows.

Mexican Model Years 1966-1992 - The first Mexican HDDV standards did not go into effect until 1993, which means any model-year mapping for the years 1966-1992 would require knowledge of those model year specific Mexican HDDV emission rates. In the absence of any such data, the mapping strategy included in the Mexican MOBILE model was used for these model years, as shown in Table 2.

Mexican Model Years 1993-2003 - From 1993 to 2003, the Mexican and U.S. certification standards for HDDVs were identical. Therefore, it was assumed that the emissions for these model year vehicles are the same for U.S. and Mexican trucks, as shown in Table 2.

Mexican Model Years 2004-2020 - Mexico adopted the 1998 U.S. HDDV certification emission standards but has not adopted either the 2004 or 2007 standards, which are progressively more stringent. Therefore, in the absence of any other data, Table 2 shows that we have assumed the emissions from 2004 and subsequent model years are equal to the US 2003 levels—the last year the U.S. and Mexican certification standards were synchronized.

Table 2
U.S. to Mexican Model Year Mapping

Mexican Fleet Model Year	Equivalent U.S. MY for Emissions	Mexican Fleet Model Year	Equivalent U.S. My for Emissions	Mexican Fleet Model Year	Equivalent U.S. MY for Emissions
1966	1966	1979	1977	1992	1989
1967	1966	1980	1977	1993	1993
1968	1966	1981	1979	1994	1994
1969	1966	1982	1979	1995	1995
1970	1968	1983	1980	1996	1996
1971	1968	1984	1981	1997	1997
1972	1968	1985	1981	1998	1998
1973	1971	1986	1982	1999	1999
1974	1971	1987	1983	2000	2000
1975	1973	1988	1983	2001	2001
1976	1973	1989	1986	2002	2002
1977	1975	1990	1986	2003	2003
1978	1975	1991	1988	2004+	2003

Model-Year-Specific Emission Rates - The mapping strategy described above was used to determine model-year-specific emission rates for Mexican HDDVs. The emission rates for HDDVs operating in the San Diego area were calculated by applying this mapping strategy to model-year output from the EMFAC2001 model. Likewise, MOBILE6 emission rates were used to calculate the Houston area Mexican HDDV emissions. For example, Table 1 shows that a 1990 model year Mexican truck has emissions comparable to a 1986 US truck. Therefore, emissions from a 1990 model year Mexican truck were assumed equal to the 1986 EMFAC2001 HDDV emission rates in San Diego, and equal to the 1986 MOBILE6 HDDV emission rates in Houston.

For the Houston emission rates, a number of additional adjustments were made to MOBILE6 estimates to best reflect the impact of off-cycle NOx emissions and the "Defeat Device" Consent Decree that was signed by EPA and the engine manufacturers on Mexican-domiciled trucks. Three primary assumptions were made regarding off-cycle NO_x emissions:

- Off-cycle NOx impacts were set to zero prior to model year 1993 and after model year 2001 for Mexican-domiciled trucks;
- The impacts of the Rebuild Program were not included in the Mexican-domiciled truck emission rates; and
- The impacts of the Pull-Ahead Program (i.e., early introduction of the 2004 standards) were not included in the Mexican-domiciled truck emission rates.

Similar adjustments were also made to the San Diego-based Mexican truck emission rates. However, because EMFAC2001 does not contain an explicit adjustment for the rebuild program, no adjustment was made to the Mexican-domiciled trucks to reflect the lack of a rebuild program.

Model-Year Travel Fractions - As discussed above and as shown in Table 1, composite calendar year emission rates are calculated by multiplying the model-year-specific emission rates by the corresponding travel fraction for each model year, and summing these products. The MOBILE5-Mexico model estimates emissions for five different regions in Mexico—Mexico City, Interior Urban, Interior Rural, Border Urban, and Border Rural. However, only three distinct HDDV

travel fractions are calculated by the model: (1) Mexico City; (2) Interior Urban; and (3) Interior Rural, Border Urban, and Border Rural. These three sets of travel fractions, along with an average of the three, are shown in Figure 1. For estimating Mexican truck emission factors for this project, the average was used.

It is interesting to compare the Mexican truck travel fractions to the travel fractions predicted by the MOBILE6 and EMFAC2001 models. That comparison is shown in Figure 2. The estimates from the MOBILE5-Mexico model generally show a maximum travel fraction for vehicles in the 10 to 15 year range, while both MOBILE6 and EMFAC2001 show a maximum travel fraction for the newest vehicles. Because older vehicles typically have higher emissions than newer vehicles (because of emission control system deterioration and standards differences through time), a Mexican fleet would have higher emissions than a U.S. fleet even if the emission standards were the same between Mexico and the U.S. for all model years. Thus both the age of the fleet (and resulting travel fraction differences) and the standards differences contribute to higher average emissions from the Mexican fleet relative to the U.S. fleet.

Figure 1

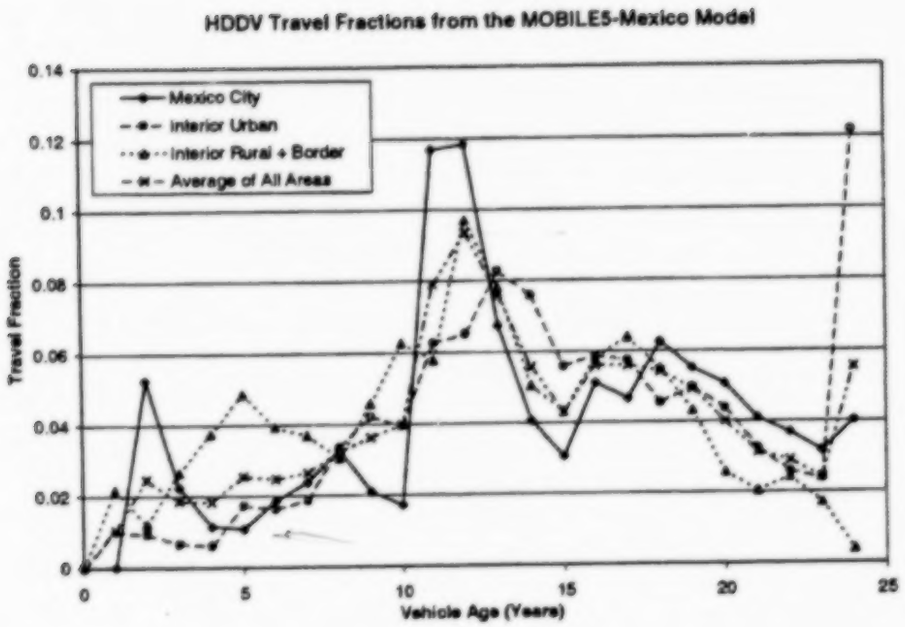


Figure 2

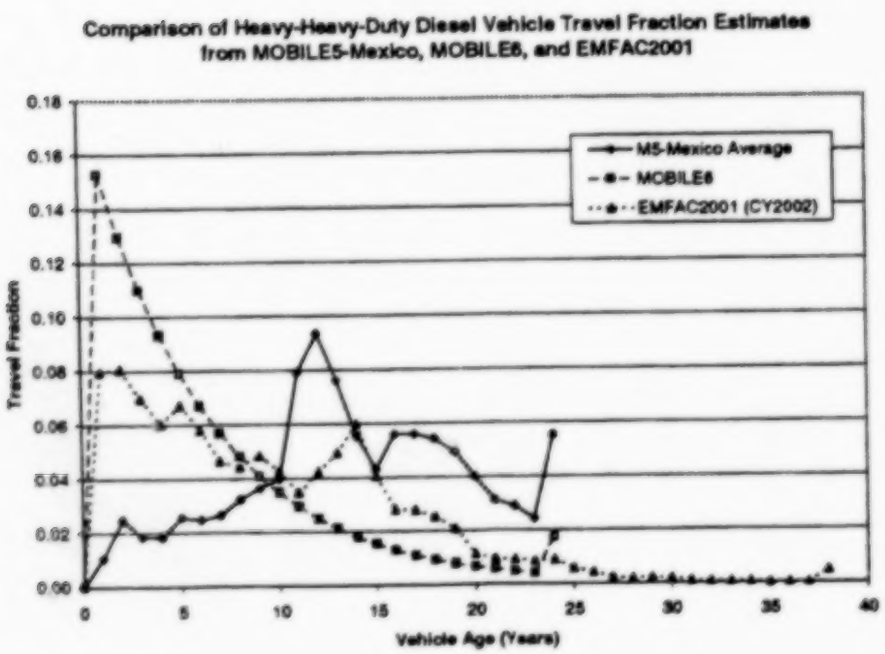


Table 3 compares of the Class 8B HDDV g/mi emission rates calculated for the Mexican fleet and the U.S. fleet (i.e., Houston) based on the MOBILE6 and PART5 models. Two estimates are given in the table—one based only standards differences and the other based on both standards differences and travel fraction differences between the U.S. and the Mexican fleets. Similar results from EMFAC2001 for San Diego are presented in Table 4.

Table 3

Comparison of Gram-Per-Mile Emission Rates of Mexican and U.S.-Domiciled Class 8B HDDVs Using MOBILE6 and PART5

Standards Differences Only—Travel Fractions the Same

	Nox (g/mi)		PM2.5 (g/mi))	
CY	Mexican	U.S.	Mexican	U.S.
2000	25.70	25.45	0.66	0.56
2002	22.96	21.65	0.54	0.47
2007	16.69	13.00	0.34	0.31
2010	14.95	9.39	0.29	0.19
2015	13.46	4.46	0.23	0.08
2020	12.80	2.18	0.21	0.05

	PM10 (g/mi)		VOC (g/mi)	
CY	Mexican	U.S.	Mexican	U.S.
2000	0.73	0.62	1.29	1.05
2002	0.59	0.51	1.07	0.90
2007	0.38	0.34	0.72	0.60
2010	0.31	0.21	0.67	0.49
2015	0.25	0.09	0.61	0.37
2020	0.23	0.05	0.60	0.33

Standards and Travel Fractions Differences Included

	Nox (g/mi)		PM2.5 (g/mi))	
CY	Mexican	U.S.	Mexican	U.S.
2000	31.54	25.45	1.49	0.56
2002	29.23	21.65	1.35	0.47
2007	24.62	13.00	0.82	0.31
2010	22.47	9.39	0.58	0.19
2015	18.03	4.46	0.29	0.08
2020	14.68	2.18	0.21	0.05

	PM10 (g/mi)		VOC (g/mi)	
CY	Mexican	U.S.	Mexican	U.S.
2000	1.63	0.62	3.33	1.05
2002	1.48	0.51	2.67	0.90
2007	0.90	0.34	1.34	0.60
2010	0.64	0.21	1.04	0.49
2015	0.32	0.09	0.71	0.37
2020	0.23	0.06	0.68	0.33

Table 4

Comparison of Gram-Per-Mile Emission Rates of Mexican and U.S.-Domiciled Class 8B HDDVs Using EMFAC2001 for San Diego

Standards Differences Only—Travel Fractions the Same

	Nox		PM2.5	
CY	Mexican	U.S.	Mexican	U.S.
2000	21.53	19.13	0.58	0.45
2002	19.91	18.06	0.49	0.38
2007	16.60	12.82	0.29	0.23
2010	15.05	9.31	0.22	0.15
2015	13.89	5.23	0.18	0.08
2020	13.48	3.32	0.17	0.04

	PM10		VOC	
CY	Mexican	U.S.	Mexican	U.S.
2000	0.63	0.48	1.34	0.96
2002	0.53	0.41	1.17	0.87
2007	0.32	0.26	0.81	0.63
2010	0.24	0.16	0.66	0.48
2015	0.19	0.09	0.56	0.32
2020	0.18	0.05	0.55	0.25

Standards and Travel Fractions Differences Included

	Nox		PM2.5	
CY	Mexican	U.S.	Mexican	U.S.
2000	24.86	19.13	0.84	0.45
2002	23.16	18.06	0.72	0.38
2007	20.42	12.82	0.46	0.23
2010	18.30	9.31	0.33	0.15
2015	16.11	5.23	0.22	0.08
2020	14.43	3.32	0.18	0.04

	PM10		VOC	
CY	Mexican	U.S.	Mexican	U.S.
2000	0.91	0.48	2.01	0.96
2002	0.78	0.41	1.77	0.87
2007	0.50	0.26	1.34	0.63
2010	0.36	0.16	1.08	0.48
2015	0.24	0.09	0.90	0.32
2020	0.20	0.05	0.78	0.25

Inventory Estimates

Emission inventory estimates for NOx, $PM_{2.5}$, PM_{10}, and VOC in units of tons per day (tpd) were generated for the San Diego and Houston areas for two scenarios: (1) no Mexican truck travel, and (2) 50% of the heavy HDDV (Class 8B) travel being made up of Mexican trucks. Because different models were used for the San

Diego and Houston areas, they are covered separately below.

San Diego - As noted above, the San Diego emissions estimates were prepared with the EMFAC2001 model. That model contains estimates of daily vehicle miles traveled (VMT) as well as emission factors, and an emissions inventory (in tons per day) can be generated directly with the model. As a result, it was a straight-forward process to prepare the emissions inventories for San Diego. Two estimates were prepared for this analysis: one assuming no travel by Mexican trucks and one assuming that Mexican trucks would make up 50% of the miles traveled by Class 8B HDDVs. For the first scenario, the model was run in its baseline configuration and the inventory estimates were used directly, with a slight modification to the $PM_{2.5}$ and PM_{10} estimates to reflect the 2007 HDDV standards as discussed above. For the second scenario, the heavy HDDV portion of the inventory was adjusted to reflect 50% Mexican truck travel. This adjustment was performed using the fleet emission factors developed in the previous section for the baseline fleet and the Mexican vehicle fleet. For example, the 2010 NOx emission factors for heavy-HDDVs were calculated as:

- U.S.-Domiciled NOx = 9.31 g/mi
- Mexican-Domiciled NOx = 18.30 g/mi

and the baseline heavy-HDDV NOx inventory is estimated by the model to be 21.27 tpd. To reflect 50% Mexican truck travel, the inventory estimate was adjusted as follows:

50% U.S. Truck Travel = 21.27/2 = 10.63 tpd
50% Mexican Truck Travel = (21.27/2)* (18.30/9.31) = 20.90 tpd

and the resulting heavy-HDDV NOx inventory is 10.64 + 20.90 = 31.53 tpd. This was then added to the non-heavy-HDDV fleet emissions to obtain the total impact of 50% Mexican truck travel on the San Diego inventory.

A summary of the inventory results for San Diego for calendar years 2007, 2010, 2015, and 2020 is contained in Table 5. Note that estimates were also prepared for the South Coast Air Basin (greater Los Angeles area) for 2010 using the same methodology outlined above for San Diego.

Table 5

Baseline San Diego Inventory (tpd) — Adjusted for 2007 PM Standard

Total On-Road Inventory

CY	NOx	PM2.5	PM10	ROG
2007	95.67	2.36	2.56	57.89
2010	77.26	2.21	2.39	46.86
2015	51.24	2.06	2.23	34.25
2020	36.06	2.03	2.20	26.96

Heavy-HDDVs

CY	NOx	PM2.5	PM10	ROG
2007	26.36	0.48	0.53	1.29
2010	21.27	0.34	0.37	1.09
2015	13.32	0.20	0.22	0.82
2020	8.7	0.12	0.13	0.66

San Diego Inventory (tpd)—Assuming 50% of Heavy HDDV Truck Travel Is Mexican Trucks

Total On-Road Inventory

CY	NOx	PM2.5	PM10	ROG
2007	103.48	2.60	2.81	58.62
2010	87.52	2.42	2.62	47.56
2015	65.12	2.24	2.43	34.99
2020	50.59	2.21	2.39	27.66

Heavy-HDDVs

CY	NOx	PM2.5	PM10	ROG
2007	34.17	0.71	0.78	2.02
2010	31.53	0.55	0.59	1.79
2015	27.20	0.38	0.42	1.56
2020	23.23	0.29	0.32	1.36

Houston - The emission factors developed for the Houston area were based on EPA's MOBILE6 and PART5 emissions model. However, in order to generate a ton-per-day inventory estimate, the g/mi emission factors need to be combined with an estimate of vehicle miles traveled (VMT). Unlike the EMFAC2001 model, neither MOBILE6 nor PART5 contain VMT estimates. Instead, the emission factors and VMT estimates are combined outside of the model to prepare an emissions inventory.

The emission factors for Class 8B HDDVs were prepared for Mexican-domiciled trucks and for U.S.-domiciled trucks as described above. However, because it was desired to compare the Mexican truck emissions impacts relative to the entire motor vehicle fleet, it was necessary to prepare inventory estimates for the entire fleet of on-road vehicles. This and PART5 ($PM_{2.5}$ and PM_{10}) with VMT estimates for the Houston area. The

VMT estimates were obtained from the 2022 Metropolitan Transportation Plan for the Houston-Galveston area,* which consists of Brazoria, Chambers, Fort Bend, Galveston, Harris, Liberty, Montgomery, and Waller Counties. Those estimates are as follows:

- 2007 - 138 million miles per day;
- 2010 - 146 million miles per day; and
- 2020 - 170 million miles per day.

Using the above VMT estimates with the MOBILE6 and PART5 emission factors,** emission inventory estimates were prepared for two cases: one assuming no travel by Mexican trucks and one assuming that Mexican trucks would make up 50% of the miles traveled by Class 8B HDDVs. The resulting inventories for 2007, 2010, 2015, and 2020 are summarized in Table 6.

---

* "Update of Metropolitan Transportation Plan 2022," Houston-Galveston Area Council, Adopted March 22, 2002.

** Note that the Houston MOBILE6 run prepared for this effort assumed that light-duty cars and trucks would be subject to an inspection and maintenance program as described on the Texas Natural Resource Conservation Commission web page (http://www.tnrcc.state.tx.us/air/ms/motoristchoice.html). In addition, it was assumed that reformulated gasoline would be in place. The MOBILE6 input file used for the baseline inventory development is attached.

Table 6

Baseline Houston Inventory (tpd) — Adjusted for 2007 PM Standard

Total On-Road Inventory

CY	NOx	PM2.5	PM10	ROG
2007	257.08	5.51	5.83	127.93
2010	201.97	4.45	4.67	103.32
2015	115.99	3.42	3.52	75.41
2020	72.52	3.18	3.24	58.28

Heavy-HDDVs

CY	NOx	PM2.5	PM10	ROG
2007	78.33	1.86	2.05	3.58
2010	60.28	1.25	1.37	3.17
2015	31.04	0.58	0.64	2.58
2020	16.55	0.34	0.37	2.48

Houston Inventory (tpd)—Assuming 50% of Heavy HDDV Truck Travel is Mexican Trucks

Total On-Road Inventory

CY	NOx	PM2.5	PM10	ROG
2007	292.05	7.06	7.53	130.18
2010	243.97	5.70	6.04	105.07
2015	163.29	4.13	4.31	76.61
2020	119.94	3.80	3.93	59.61

Heavy-HDDVs

CY	NOx	PM2.5	PM10	ROG
2007	113.30	3.41	3.75	5.83
2010	102.28	2.50	2.75	4.92
2015	78.34	1.30	1.43	3.78
2020	63.97	0.97	1.06	3.81

Attachment

Baseline MOBILE6 Input File for Houston Inventory Development

```
**********      Header Section      *******
MOBILE6 INPUT FILE

POLLUTANTS    :   HC NOX

RUN DATA
**********      Run Section         *******

>ASM Exhaust I/M program for pre-1996 MY
 LDGV/T
I/M PROGRAM          :1  1983  2050  1  TRC  ASM
2525/5015 PHASE-IN
I/M MODEL YEARS      :1 1981 1995
I/M VEHICLES         :1 22222 11111111 1
I/M STRINGENCY       :1 20.0
I/M COMPLIANCE       :1 96.0
I/M WAIVER RATES     :1 3.0 3.0
I/M GRACE PERIOD     :1 2
I/M EXEMPTION AGE    :1 25

> OBD Exhaust I/M program for 1996+ MY
LDGV/T
I/M PROGRAM          :2  1983  2050  1  TRC  OBD
I/M
I/M MODEL YEARS      :2 1996 2050
I/M VEHICLES         :2 22222 11111111 1
I/M STRINGENCY       :2 20.0
I/M COMPLIANCE       :2 96.0
I/M WAIVER RATES     :2 3.0 3.0
I/M GRACE PERIOD     :2 2
I/M EXEMPTION AGE    :2 25
```

```
> OBD Evap I/M program for 1996+ MY LDGV/T
I/M PROGRAM          : 3  1983  2050  1  TRC  EVAP
 OBD
I/M MODEL YEARS      : 3 1996 2050
I/M VEHICLES         : 3 22222 11111111 1
I/M STRINGENCY       : 3 20.0
I/M COMPLIANCE       : 3 96.0
I/M WAIVER RATES     : 3 3.0 3.0
I/M GRACE PERIOD     : 3 2
I/M EXEMPTION AGE    : 3 25

* Assume refueling is included in area source
  inventory
NO REFUELING         :

* Detailed HDDV results
EXPAND HDDV EFS      :

MIN/MAX TEMP         : 77.0 96.0
FUEL RVP             : 6.7
FUEL PROGRAM         : 2 S

* Need to specify season because we are doing
  a January-based inventory
* to be consistent with MOBILE5-Mexico

SEASON               : 1

**********      Scenario Section   *******

SCENARIO RECORD  :  Baseline Houston - CY2007
CALENDAR YEAR    :  2007

SCENARIO RECORD  :  Baseline Houston - CY2010
CALENDAR YEAR    :  2010

SCENARIO RECORD  :  Baseline Houston - CY2015
CALENDAR YEAR    :  2015

SCENARIO RECORD  :  Baseline Houston - CY2020
CALENDAR YEAR    :  2020
```


BILL LOCKYER
Attorney General

State of California
Department of Justice

[Address & Telephone Numbers omitted]

April 18, 2002

VIA FACSIMILE & U.S. MAIL

Honorable Julie Anna Cirillo, Deputy Administrator
Federal Motor Carrier Safety Administration
c/o Docket Clerk
U.S. DOT Dockets
Room PL-401
400 Seventh Street, S.W.
Washington, D.C. 20590-0001

RE: Docket Nos. FMCSA 98-3291, 3298, 3299
Supplemental Comments addressing FONSI and Final Programmatic Environmental Assessment dated January 16, 2002

Dear Deputy Administrator Cirillo:

California Attorney General Bill Lockyer, acting in his independent capacity to protect the natural resources of the State of California, respectfully summits the following comments to the Federal Motor Carrier Safety Administration's ("FMCSA") Finding of No Significant Impact ("FONSI") and Programmatic Environmental Assessment ("PEA") dated January 16, 2002, and made public on March 14, 2002. After careful review and evaluation, we believe that the FONSI and underlying environmental assessment issued by FMCSA are patently inadequate and fatally flawed in terms of scope and methodology used to assess the potential environmental, particularly air quality, impacts that will result if FMCSA implements the

proposed rules and approves registration applications by Mexican motor carriers to operate beyond established commercial zones within the U.S.-Mexico border.

Based on the reasons further discussed below, Attorney General Bill Lockyer strongly recommends that FMCSA reconsider its position and comply with its responsibilities pursuant to the National Environmental Policy Act (42 U.S.C. section 4371 *et seq.*) and the Clean Air Act (42 U.S.C. section 7401 *et seq.*). A technical evaluation of FMCSA's environmental assessment which further supports the Attorney General's comments is enclosed and incorporated herein for consideration. We also incorporate by reference our prior comment letter and prior technical report regarding the regulations, as though set forth in full here.

The National Environmental Policy Act

As previously stated in the Attorney General's October 2001 comments, the National Environmental Policy Act ("NEPA") imposes upon FMCSA certain basic and fundamental requirements in order to adequately assess whether its proposed "federal action," which is defined to include the promulgation of new or *revised* rules and regulations, has the potential for "significantly affecting the quality of the human environment." (42 U.S.C. section 4332(2)(C); 40 C.F.R. section 1508.18(a).) Pursuant to federal regulations promulgated by the Council on Environmental Quality, the "significance" of FMCSA' proposed agency action must be analyzed in several contexts, including "society as a whole (human, national), the affected region, the affected interests, and the locality." (40 C.F.R. section 1508.27(a).) In this context, CEQA regulations require that the severity of the environmental harm should consider "[w]hether the action threatens a violation of

the Federal, State, or local law or requirements imposed for the protection of the environment." (40 C.F.R. 1508(b)(l0).) We believe that the California Health and Safety Code, sections 40919, 40920, and 40920.5 are relevant, in that these statutes impose certain specific legal requirements for air basins in California that are designated as serious, severe, or extreme for attainment of at least one criteria pollutants; there are multiple areas that would be affected by these regulations to which these Health and Safety Code sections apply.

In identifying and assessing the particular "impacts" upon the environment, FMCSA is also required to consider direct, indirect, and cumulative impacts taking place over both short *and* long-term periods of time. (*Id.*; 40 C.F.R. section 1508.8.) "Direct effects" are caused by the proposed action and occur at the same time and place. (40 C.F.R. section 1508.8(a).) "Indirect effects" are caused by the proposed action but occur later in time, are further removed in distance, and are reasonably foreseeable. (40 C.F.R. section 1508.8(b).) And finally, "cumulative effects" are those which result from incremental impacts of the action when added to other past, present, and reasonably foreseeable future actions regardless of which agency (federal or non-federal) or person undertakes such actions. (40 C.F.R. section 1508.7)

Although we are pleased to note that FMCSA now appears to agree with Attorney General Bill Lockyer that the promulgation of the Mexico-domiciled motor carrier rules requires compliance with NEPA (67 FR 12702, 12704), FMCSA has still failed to comply with basic NEPA requirements as outline above and further discussed below. We continue to believe that a full environmental impact statement is the required

evaluation procedure mandated by NEPA. Therefore, FMCSA's environmental assessment does not provide sufficient evidence and analysis to properly evaluate, let alone support, FMCSA's finding of "no significant impact." (40 C.F.R section 1508.9.)

The Clean Air Act

Pursuant to the "conformity provisions" contained in the Clean Air Act, 42 U.S.C. section 7506(c), federal agencies such as FMCSA are prohibited from approving or supporting "in any way" any activity which does not conform to an approved State Implementation Plan ("SIP"). "The assurance of conformity to such an implementation plan *shall be an affirmative responsibility* of the head of such department, agency, or instrumentality." (Emphasis supplied; *Id.*) "Conformity" means that the proposed action or activity will not cause or contribute to new violations, increase the frequency or severity of violations, or delay attainment of various standards, requirements, and milestones. (42 U.S.C. section 7506(c)(l)(B).) Furthermore, conformity to such state implementation plans must be demonstrated in accordance with criteria and procedures as established in federal regulations and existing applicable state requirements. (42 U.S.C. section 7506(c)(4); 40 C.F.R. section 93.150 *et seq.*; 40 C.F.R. section 51.850 *et seq.*) This is precisely the type of federal action that conformity is intended to reach: an activity where federal action makes it much more difficult for a state to meet the federally mandated National Ambient Air Quality Standards. The federal government here is requiring California to meet stringent air quality standards, including the new fine particulate and revised ozone standards for which a SIP call will soon be forthcoming, while simultaneously approving the

entry into California of a very significant new source of pollutants that will make it more difficult to attain these standards.

Under federal regulations, FMCSA is required to conduct a conformity determination for *each pollutant* where the *total* of direct and indirect emissions[1] in a nonattainment or maintenance area caused by the proposed action would either (1) equal or exceed any of the rates as established by the U.S. Environmental Protection Agency ("US EPA") in 40 C.F.R. sections 51.853(b) and 93.153(b), and/or (2) constitute 10% or more of a nonattainment or maintenance area's total emissions of that pollutant (i.e. federal action which is "regionally significant"). (40 C.F.R. sections 51.853(i) and 93.153(i).) The determination of conformity must be based upon "the most recent estimates of emissions, and such estimates shall be determined from the most recent population, employment, travel and congestion estimates as determined by the metropolitan planning organization or other agency authorized to make such estimates." (42 U.S.C. section 7506(c)(l)(B); 40 C.F.R.

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[1]"'Direct emissions' means those emissions of a criteria pollutant or its precursors that are caused or initiated by the Federal agency action and occur at the same time and place as the action." (40 C.F.R. sections 93.152 and 5 1.852.) "'Indirect emissions' means those emissions of a criteria pollutant or its precursors that: (1) are caused by the Federal action, but may occur later in time and/or may be further removed in distance from the action itself but are still reasonably foreseeable; and (2) the Federal agency can practicably control and will maintain control over due to a continuing program responsibility of the Federal agency." (*Id.*) "'Total of direct and indirect emissions' means the sum of direct and indirect emissions increases and decreases caused by the Federal action; i.e., the 'net' emissions considering all direct and indirect emissions." (Id.)

sections 93.159(a) and 51.859(a).) [2] With regard to motor vehicle emissions, the U.S. EPA's most current emissions model must be used for a conformity analysis. (40 C.F.R. section 93.159(b)(l) and 51.859(b)(l).) Furthermore, the conformity determination required to be performed by FMCSA must reflect emission scenarios that are expected to occur under each of the following cases: (1) the CAA's mandated attainment year, or if applicable, the farthest year for which emissions are projected in the maintenance plan; (2) the year during which the total of direct and indirect emissions are expected to be the greatest on an annual basis; and (3) any year for which the applicable SIP specifies an emissions budget. (40 C.F.R. sections 93.159(d) and 51.859(d).)

Instead of accepting and performing its affirmative duties as required by the CAA's conformity determination provisions, FMCSA, in response to Attorney General Bill Lockyer's October 2001 comments, has indicated that its proposed action does not require a conformity determination. (67 FR 12702, 12704-05.) The basis for this erroneous determination is grounded on FMCSA's contention that the proposed action is exempt because the proposed rules (1) "would result in no increase in emissions or clearly a de minimis increase" and (2) do "not exceed certain threshold emissions rates set forth in 40 C.F.R. 93.153(b)." (*Id.*) Although not expressly stated in its response to the Attorney General's prior comments, it appears that FMCSAis relying upon its NEPA environmental assessment and "finding of no significant impact" to

[2] Any revision to these estimates must be approved by the MPO or other agency authorized to make such estimates for the urban area. (40 C.F.R. 51.859(a)(2).)

support this groundless contention. Consequently, because FMCSA's environmental assessment is fatally flawed and deficient, FMCSA's basis for its determination that its proposed action is exempt from the CAA's conformity provisions is equally flawed. The technical report we are filing today show that a conformity determination is required.

FMCSA's Environmental Assessment is Fatally Flawed

The January 16, 2002 environmental assessment that was prepared on behalf of FMCSA does not comply with the spirit, nor the express applicable provisions of the law as cited above.

The following are a few examples which demonstrate that FMCSA's environmental assessment is completely inappropriate for assessing the air quality impacts at issue:

1. The project is incorrectly defined, its definition artificially limited. As the FONSI itself explains, the FMCSA regulations are essential to the entry of Mexican carriers into this country for long-haul operation, meaning that the environmental effects caused by these carriers' trucks are directly linked to the adoption of the regulations.

2. With respect to FMCSA's air quality evaluation, the document uses incorrect assumptions, outdated data, and a focus that violates CEQA regulations. NEPA requires that the best data be used, in order to fulfill the NEPA mandate of full public disclosure. *(See,* e.g., 40 C.F.R. section 1500.1(b); 40 C.F.R. section 1502.22(a).) FMCSA virtually ignores significant and well documented differences that exist between U.S. and Mexico emission standards for heavy-duty diesel

trucks. These emission differences can be attributed to many reasons, including:

(a) *Age Distribution Differences*: As recognized in many reliable sources of data, including the February 21, 2001 report entitled "North American Trade and Transportation Corridors: Environmental Impacts and Mitigation Strategies," prepared for the North American Commission for Environmental Cooperation by ICF Consulting, on average, the Mexican fleet of heavy-duty diesel vehicles are older than the California fleet of vehicles. Accordingly, because older trucks generally have higher emissions than newer vehicles, the Mexican fleet will have higher emissions than the California fleet. These emission differences will become even more significant in the near future (i.e., years 2004, 2007, etc.) as the United States federal government (through US EPA) and California carry out the future heavy duty diesel truck emission.

(b) *Regulatory Differences*: It is also well recognized that prior to 1993, Mexican heavy-duty engines were not regulated. Thus, while *current* Mexican emission standards correspond to U.S. *current* standards, the past and future standards for heavy-duty vehicles were and will be more restrictive than those applicable to Mexico-domiciled heavy-duty vehicles. Consequently, those pre-1993 heavy-duty vehicles which are in operation now, and will continue to be in operation for the foreseeable future, will emit at higher levels miles than comparable California or Federal trucks throughout their useful lives, which might be well over one million miles.

(c) *Legal Enforcement Differences*: The federal government has entered into a consent decree with U.S. heavy-duty diesel engine manufactures which require the manufactures to retrofit heavy-duty engines in order to correct a "defeat device" employed by manufacturers to circumvent emission regulations. These "retrofit" agreements do not apply to Mexican or Canadian vehicles, thus resulting in higher per vehicle emissions for Mexican line-haul trucks compared with California or other federal trucks.

(d) *Diesel Fuel Composition Differences*: Commencing in 2007, Federal and California diesel fuel standards will require very significantly lower levels of sulfur, which should result in lower emission levels of some pollutants. Further, and of increasing importance as the new diesel emissions standards take effect in future years, low sulfur fuels will be an absolute necessity to allow new emission control devices such as particulate traps to function. At the present time, we are not aware of any evidence indicating that Mexico will adopt, and later implement and enforce, similar low sulfur diesel fuel standards.

3. In performing its environmental assessment for potentially significant air quality emission impacts caused by the Mexico-domiciled motor vehicles, FMCSA is required to conduct its assessment by evaluating emission impacts on regional and more localized areas of concern that are potentially affected by the projected emissions. (40 C.F.R. section 1508.27(a); 42 U.S.C. section 7506(c)(l)(B); 40 C.F.R. sections 93.150 *et seq.* and 51.850 *et seq.*) In California, there exists several "nonattainment" areas of concern which will be

impacted by higher emissions from Mexico-domiciled motor vehicles traveling through U.S. freight trade corridors. FMCSA, however, failed to assess the air quality impact of increased emissions and increased ambient pollutant levels in those areas where the impacts of the "no action" and "proposed action" scenarios are likely to be greatest. Instead, FMCSA improperly evaluated overall U.S. emissions and virtually ignored those areas of concern in California which currently do not comply with existing federal air quality requirements and/or are likely to be out of compliance with future U.S. EPA requirements. A map of the areas of California and their ozone attainment status can be found at the California Air Resources Board's website, at *http://www.arb.ca.nov/desig/adm/classi.htm.* A similar map for federal designations can be found at *http://www.epa.gov/region09/air/maps/r9 o3.html.* Another example of the inadequate scope of the evaluation is FMCSA's failure to assess localized air quality impacts caused by the required increase in safety inspections of Mexico-domiciled motor vehicles that will be conducted if the proposed rules are implemented.

Contrary to FMCSA's improper evaluation, the enclosed technical evaluation report includes a "localized area" analysis of emissions from Mexican line-haul trucks, instead of California line-haul trucks, which will impact the Calexico - Mexicali border region in Imperial County, California. This analysis (summarized in Tables 6 - 8 of the report) demonstrates that the emissions increase from allowing access of Mexican line-haul trucking across Imperial County would have increased diesel PM by 2.6% overall or 15% from heavy-duty diesel trucks in the absence of increased vehicle

activity. By any definition, the increased emissions in this area constitute a "significant" impact that requires preparation of a full environmental impact statement for FMCSA's action. In future years, the relative disparity between U.S. and Mexican trucks is expected to be considerably greater as more stringent heavy-duty vehicle emission standards are implemented in California, making the impacts even more significant.

4. FMCSA's environmental assessment, flawed as it is, only purports to examine air quality emission impacts for a one-year fixed period of time, 2002. As set forth above, NEPA and the CAA require that an environmental assessment of potentially significant impacts be conducted for all reasonably foreseeable scenarios which span over short *and* longer periods of time. (40 C.F.R. sections 1508.8 and 1508.27(a); 40 C.F.R. section 93.159(d) and 51.859(d).) To do otherwise impermissibly piecemeals the project and fails to provide the full environmental disclosure that is NEPA's primary purpose. FMCSA provides no explanation why its deficient assessment only covered a one-year period of time. In reality, this single year will itself be almost half over by the time FMCSA contemplates the rules taking effect, making the FONSI apply to only about seven months by its own terms. This is not reasonable by any standard. FMCSA's failure to consider and evaluate the proposed action under a longer and more realistic time horizon results in a failure to properly consider the total indirect and cumulative human environmental impacts (i.e., both criteria and toxic effects of diesel emissions as discussed below) caused by the proposed action. (40 C.F.R. sections 1508.8 and 1508.7; See also 40 C.F.R. sections 51.853(b) and 93.153(b).) In particular, where exposure

to carcinogens is involved, the effects of long-term exposure must be considered, analyzed, and disclosed.

5. As noted in Attorney General Bill Lockyer's October 2001 comments, emissions from diesel engines, which contain VOC constituents that are listed as Federal and California carcinogens, pose the majority (about 70%) of the cancer risk due to ambient toxics concentrations in the South Coast Air Basin. ("Multiple Air Toxics Exposure Study I1 (MATES-II)", published by South Coast Air Quality Management District (March 17, 2000).) Diesel engine exhaust is known to the State of California to cause cancer. (Cal. Code of Regs., tit. 22, § 12000.) In addition, the Science Review Panel of the California Air Resources Board has designated the particulate component of diesel exhaust as a Toxic Air Contaminant. (Cal. Code of Regs., tit. 17, § 93000.) Although our office pointed these designations out in our previous comments, FMCSA appears to ignore the issue altogether. The FONSI contains *no* assessment whatever of potential health risks posed by diesel engine exhaust increases due to the project. Emissions of diesel exhaust from Mexican carriers' trucks are expected to increase under the project, and over time will comprise a larger and larger portion of the overall air toxics emissions inventory for areas such as Imperial County. As set forth above, NEPA mandates that localized impacts from air toxic emissions should be addressed by FMCSA, especially in areas that will be more severely impacted from the proposed increase in diesel truck traffic and emissions.

6. NEPA and the CAA's conformity provisions require FMCSA to use the most recent estimates of emissions, determined from the most recent sources of available data. The emissions model used by FMCSA,

MOBILE5, is outdated and does not incorporate more recent and reliable data available through other sources such as U.S. EPA's MOBILE6, California's EMFAC2001, and the February 21, 2001 CEC report referenced above. (42 U.S.C. section 7506(c)(l)(B); 40 C.F.R. sections 93.159(a) and 51.859(a); 40 C.F.R. 1500.1(b), 1502.22(a).) These more recent emissions models incorporate higher, and more realistic, NO_x emission rates for heavy-duty vehicles. As an example, under MOBILE6, the heavy-duty vehicle per mile emission rate for NO_x is higher than the comparable emission rate under MOBILE5. And, as shown in Tables 5 and 6 of the enclosed report, when Mexican truck emission rates and standards are incorporated into the analysis, the resulting emissions impact from Mexico-domiciled trucks is much greater than that predicted by FMCSA under its flawed evaluation. A similar corresponding analysis for PM emissions also reveals a significantly higher rate of emissions for Mexico-domiciled trucks than U.S. trucks, another fact virtually ignored by FMCSA.

7. In several sections of the environmental assessment, FMCSA makes estimates and assumptions which do not appear to be adequately substantiated by documentary evidence. For example, at pages 2-11 of its report, FMCSA estimates that "about 130,000 of the 4000 trucks and buses that are operating on Mexican Federal roads were built after 1994 (FMCSA 2001h)." The citation, which if credible, is relevant to estimating emissions of the Mexican fleet, is a reference to one e-mail communication between FMCSA and a Mexican bureau. Perusal of the References section of the FONSI shows that out of 48 references cited, seven are e-mail communications, nearly 15% of the total refer-

ences upon which the document relies. Neither the text nor the provenance of these e-mails is provided in the FONSI, and their accuracy is therefore not subject to public review or verification. We expect that any NEPA document will have one or two personal communications on minor points. Here, however, the information that is relied on but not disclosed or documented is more than minor here; it goes to some of the most crucial assumptions upon which the environmental analysis rests, such as number of border crossings expected. This is a violation of NEPA's full disclosure requirements.

Based on the reasons set forth in the previously filed comments, and in the supplemental comments outlined above, as well as the technical reports filed with the comments, we strongly request that FMCSA reconsider its possession and comply with its responsibilities as set forth in NEPA and the CAA which require that: (1) a full and complete Environmental Impact Statement be prepared and submitted for public comment and (2) a conformity determination be prepared to determine the impact of the proposed action on California's State Implementation Plan.

Please contact Susan Durbin at the number listed at the beginning of this letter, or Ed Ochoa at (619) 645-2041, if you have any questions regarding this comment letter.

Sincerely,

/s/ SUSAN DURBIN
SUSAN DURBIN
ED OCHOA
Deputy Attorneys General

For BILL LOCKYER
Attorney General

Enclosure

cc: US EPA Administrator Christie Whitman

ENVIRON

MEMORANDUM

To: Ed Ochoa, CA Attorney General's Office

From: Chris Lindhjem, Alison Pollack, and Doug Daughtery

Date: 18 April 2002

Subject: Review of emissions increases with Mexican heavy-duty diesel trucks operating in California and elsewhere in the U.S.

Executive Summary

The purpose of this document is to provide a critical review of the air quality analysis of the environmental impacts of cross-border diesel truck emissions performed in support of the Federal Motor Carrier Safety Administration's (FMCSA's) Finding of No Significant Impact (FONSI) and the Programmatic Environmental Assessment (FMCSA, 2002). We find many shortcomings in the air quality analysis. The analyses that should be conducted and issues that should be addressed when evaluating the impact of the considered policy options include the following:

(1) The emission model used in the FMCSA, MOBILE5, is outdated and has been replaced with the recent release of MOBILE6 for Federal vehicles. Also, California has developed a similar model (EMFAC2001 is the latest release) for vehicles in use in California, though

EMFAC can be difficult to use with non-standard estimates. In these latest emissions models, NO_x emission rates for heavy-duty vehicles are higher. Use of these models would thus show more significant overall emissions and therefore a greater emissions impact from line-haul trucking activity.

(2) Differences between US and Mexican emission standards for heavy-duty diesel truck engines are not properly addressed. Mexican heavy-duty engines were not regulated before 1993, and future Mexican regulations of these trucks may not correspond to the US regulations starting in 2004, with additional reductions beginning in 2007. Because heavy-duty trucks are used for many years, higher emitting pre-1993 Mexican trucks will still be operating now and for some time to come. Therefore both present and future Mexican trucks will emit at higher levels than comparable California or Federal trucks, a fact not disclosed or analyzed in FMCSA (2002).

(3) Mexican truck fleets are on average older than California truck fleets. Combined with the differences in the emission standards, the older Mexican vehicle fleet will have higher emissions presently and in the future. This was not considered in FMCSA (2002).

(4) The US has entered in legal agreements to retrofit heavy-duty engines to correct a defeat device employed by many manufacturers to circumvent emission regulations. This retrofit agreement does not apply to Mexican vehicles,

thus resulting in higher per vehicle emissions for Mexican line-haul trucks compared with California or other US trucks. FMCSA (2002) did not account for this difference between Mexican and US legal requirements.

(5) Localized impacts from air toxic emissions should be addressed in some areas because those areas, primarily located in border counties, will bear a far greater impact from the proposed increase in Mexican diesel truck traffic than any other area of the US. Evaluating overall US emissions as was done by FMCSA minimizes this impact. We have made a comparison of the effect of Mexican instead of California line-haul trucking for Imperial County using current emissions estimates; the analysis indicates a greater impact on this county than was estimated using US total comparisons.

For these reasons described in more detail in the remainder of this memorandum, California heavy-duty vehicle fleets emit much less than corresponding Mexican vehicle fleets and would impact California counties disproportionately. FMCSA's analysis should have compared the impact of the relative emissions rates between Mexican and California (or Federal for other states) vehicle fleets instead of assuming that these emissions were identical.

Emission Models

The proposed and no change alternatives were analyzed using EPA's MOBILE5 model, which is now an obsolete model. In January 2002, EPA released the dramatically updated version MOBILE6 for estimating

on-road VOC, CO, and NO_X. For heavy-duty trucks and diesel-powered trucks (HDDV) in particular, NO_X emissions are higher in MOBILE6. Light-duty NO_X emissions are lower in MOBILE6, thus increasing the HDDV contribution to on-road NO_X emissions. The heavy-duty vehicle per mile emission rates using MOBILE5 and MOBILE6 are compared later in this document in Table 5, demonstrating higher NO_x levels in general and widening the gap between lower California and higher Mexican vehicle emissions levels when emission standards, age distribution, and legally required rebuilds for US vehicles are appropriately considered.

EPA's model for estimating on-road particulate matter emissions is PART5. This model is very dated, and EPA is working on an update to be incorporated into MOBILE6, but that model revision is not yet available. PART5 PM10 emission rates, adjusted for differences between Mexican and US heavy-duty standards and age distributions, are higher for Mexican vehicle fleets compared with California fleets. FMCSA (2002) erroneously assumed that each fleet emitted at identical levels.

EPA had released a draft version and provided documentation of the MOBILE6 model by early 2001, offered training courses in its use in September 2001, and had conducted and published a number of studies investigating the expected emissions effects with MOBILE6's use. FMCSA (2002) made no mention that the emissions model used in their analysis was expected to significantly change and that NO_x emissions for HDDV were expected to increase markedly.

The State of California Air Resources Board (ARB) has used a California-developed emissions model, EMFAC,

for on-road vehicle emissions inventory model; the latest release of EMFAC2001 that is available is version 2.08. EMFAC estimates VOC, CO, and NO_X, and PM. However, we had difficulty (because of an apparent bug in the model) in applying the Mexican age distribution to provide a comparison in emission rates between Mexican and California heavy-duty vehicle fleet emission rates using EMFAC2001.

One important effect included in EMFAC is the emission reductions associated with the use of California diesel fuel as shown in Table 1. Mexican (and out-of-state) heavy-duty diesel vehicles should have been modeled with higher emissions from the use of diesel fuels purchased out of state but consumed within California. California diesel fuel has additional requirements beyond federally mandated US diesel fuel: CA diesel has restricted the level of aromatics, lower distillation temperatures, and other parameters, and has been shown in testing to produce lower NO_x and PM emissions in test engines.

Table 1. Emission reduction using California diesel fuel instead of US highway diesel fuel.

Model Year	NO_x	PM
1994+	12.5%	10.3%
1991-93	12.5%	30.6%
pre-1991	5.8%	19.9%

Emission Standards

There are a number of assumptions in the air quality modeling FMCSA (2002) that should be revised to accurately assess the relative impacts of either the No Action or Proposed Action cases, both of which allow unrestricted access by Mexican vehicles on US roadways. FMCSA appeared to have assumed Mexican vehicles to be identical to US trucks in terms of the emission standards.

However, there are significant differences in absolute emission levels of the standards and in the implementation dates of those standards. Shown in the Tables 2-4 are the past, current, and future applicable standards for California, US Federal (including future California), and Mexican vehicles. While the current Mexican emission standards correspond to US standards, the past and future standards for US heavy-duty vehicles were and will be more restrictive than those applicable to Mexican-regulated heavy-duty vehicles. There were no applicable emission standards for Mexican heavy-duty vehicles prior to 1993, and previous assessments (ICF, 2001) acknowledged and included this in their modeling, though FMCSA (2002) did not include this fact in its analysis. Future year effects were not modeled in FMCSA (2002), though the emissions from future US and Mexican vehicles are expected to diverge more widely than the emissions from current vehicles.

Table 2. California HDDV emission standards (g/bhp-hr).
(Urban buses have different standards for some model years).

Year	HC	CO	NOx	PM
1987-90	1.3	15.5	6.0	0.60
1991-93	1.3	15.5	5.0	0.25
1994+	1.3	15.5	5.0	0.10

Table 3. Federal HDDV emission standards.
(Urban buses have different standards for some model years).

Year	HC	CO	NOx	PM
1985-87	1.3	15.5	10.7	None
1988-89	1.3	15.5	10.7	0.60
1990	1.3	15.5	6.0	0.60
1991-93	1.3	15.5	5.0	0.25
1994-97	1.3	15.5	5.0	0.10
1998+	1.3	15.5	4.0	0.10
2004+	2.4 or 2.5 NMHC+NOx, limit of 0.5 on NMHC	15.5		0.10
2007+	0.14 NMHC proposed	15.5	0.2	0.01

Table 4. Mexican HDDV emission standards.

Year	HC	CO	NOx	PM
1993	1.3	15.5	5.0	0.25
1994-97 (HH urban bus/MH, light, other buses)	1.3	15.5	5.0	0.07/0.10
1998+ (HH urban bus/MH, light, other buses)	1.3	15.5	4.0	0.05/0.10

It should be noted that Federal and California regulations for 2007 and later engines require that diesel fuel sulfur levels to be significantly lower than diesel fuel currently produced to enable the future engine exhaust standards to be met. Without such lower sulfur levels, vehicles meeting the US emission standards may not be able to operate properly in Mexico or

may unintentionally compromise their emission control devices. We are not aware of any plans for Mexico to adopt similar low sulfur diesel fuel regulations; if not, then California vehicles that purchase fuel in Mexico and return to operate within California will have compromised their emission control devices.

Mexican trucks using the current California diesel could have reduced NO_x and PM emissions from current levels. Additional, though marginal, PM emissions reductions could be realized with use of the future Federally mandated lower sulfur diesel fuels, though Mexican adoption of all of the U.S. emission standards (including exhaust) would realize greater benefit.

Age Distribution

Based on the quote below, it appears that the FMCSA analysis made no distinction between Mexican and US vehicle emissions or age distribution.

> *"Only heavy-duty gasoline and diesel vehicles and buses were modeled. The default fleet mix for vehicle-miles-traveled as provided by the models was used." FMCSA (2002)*

This assumption ignored previous work (shown below from ICF, 2001; referenced by FMCSA) where significant differences were noted between Mexican and US vehicle fleets in both average age and emission standards and reflected in the estimated age distributions and air quality analysis.

> *"The emission factors are dependent upon the age of the fleet and mileage accumulation rates. The (1999) age distributions for the U.S. and Canadian trucks were based on line haul truck registration data. The trucks were assumed to have national*

average levels of tampering and not subject to an Inspection/ Maintenance program. PM-10 factors only reflect exhaust emissions, not re-entrained road dust. The Mexican line-haul fleet was assumed to have the same age distribution as Canada and the U.S. However, pre-1993 Mexican trucks are treated as unregulated emissions (pre-1988 U.S. fleet with appropriate mileage accumu-lation), since Mexico had no diesel truck emission standards prior to that model year. We assumed the Mexican drayage fleet (for cross-border movements) was an average of five years older than the U.S. and Canadian line-haul fleets, with the resulting net effect that only 10% of the fleet was post-1993 trucks. Diesel fuels in Mexico were assumed to be the same as the U.S., with 500 parts per million (ppm) sulfur." ICF (2001)

In addition, age distribution information is available for several border crossings; these data demonstrate the increased age of the Mexican fleet. ARB has investigated age distributions for California and Mexican vehicle fleets in several border counties including those for Imperial County. Figure 1 compares the ARB assumptions for the age distributions for Mexican and California heavy-duty vehicles in Imperial County; the figure shows that ARB assumes that Mexican vehicles are older on average than their US counterparts.

[Figure 1 Illegible]

Figure 1. 1998 age distribution of CA and Mexican HDDV's is Imperial County. Vertical axis is the proportion of the HDDV fleet corresponding to each year of age.

Consent Decree

In late 1998, the Department of Justice and the U.S. Environmental Protection Agency entered into a Consent Decree with heavy-duty engine manufacturers, who were charged with selling engines equipped with so-called "defeat devices" that allow an engine to pass the EPA emissions test, but then turn off emission controls during highway driving. This result in "off-cycle" NO_x emissions (i.e., emissions from engines running at different operating parameters than in the EPA certification test cycle) being significantly higher for these engines. Among other provisions, the Consent Decree stipulates that the engine manufacturers must provide rebuild kits to reduce the NO_x emissions in 1993-1998 model year trucks. EPA (May 27, 1999) subsequently sent a letter to all rebuilders of engines in the US explaining the requirements that all rebuilt engines with significant rebuilds must rebuild with the low NO_x rebuild kits provided by the engine manufacturers. In a letter from one of the engine manufacturers to its distributors (Cummins, dated June 2, 1999), the breadth of the program is outlined:

"The terms of the Consent Decree apply to the US, as well as other US Territories, including Puerto Rico, The US Virgin Islands, Guam, Samoa, and the Mariana's (Commonwealth of the Northern Mariana Islands). It does not apply (at this time) to rebuilds in Canada, Mexico, or other areas of the world."

It is important to note that Mexican and Canadian trucks are not included in the rebuild program.

EPA, in its technical documentation for MOBILE6, describes its assumption of the effect of the rebuilds on emissions. The background data from this report indicate that EPA is assuming that NO_X emissions for 1994 – 1998 (1993 model year engines are expected to receive little benefit) model year engines will be reduced by about 36 percent from pre-rebuild levels.

In addition, the Consent Decree includes a provision to have the engine manufacturers begin supplying engines meeting the 2004 emission standard in October 2002. The early (October 2002) implementation of this emission standard through the Consent Decree will not apply to the Mexican vehicle fleet. Thus, Mexican vehicles sold from October 2002 to January 2004 would meet a higher emission standard even if the Mexican government adopted the US 2004 emission standards. While Mexican fleet owners might consider purchasing engines meeting the U.S. Consent Decree requirements during this period, we expect that such engines would not be available outside the U.S.

Emissions Comparisons

Sets of emission runs were made using a variety of emissions models and other calculations using assumptions associated with these emissions models.

We compared the emissions associated with the differences in the emission standards and age distributions between California and Mexican heavy-duty trucks using MOBILE5b, MOBILE6, and PART5. All runs were made at 55 miles per hour average speed, the expected speed for line-haul trucks passing through Imperial County, a border county in California. To compare MOBILE5 and MOBILE6, an average of all heavy-duty diesel vehicles (HDDV include large pickup trucks through line-haul trucks) is presented to compare results using more realistic estimates than those assumed by FMCSA (2002), where Mexican and California vehicles emission rates were assumed to be identical. In all cases, Table 5 shows that the absence of pre-1993 emission standards, combined with the advanced age of the Mexican vehicles, produced higher emissions rates for the Mexican vehicle fleet than those predicted for the California vehicle fleet. MOBILE6 also allowed for estimating what would occur if these truck engines completely eliminated the use of the defeat device outlined in the Consent Decree. In each case in Table 5, the emission model indicated was used, along with the best available data and information to properly represent the age distribution and emission standards described under each scenario.

Table 5. Year 2000 emission rates using a range of assumptions.

Model	Scenario	HDDV Emission Factors (g/mi)			
		VOC	NOx	CO	PM10
MOBILE5b	California 1998 Reg. Dist.*	1.26	19.1	6.6	-----
MOBILE5b	Mexican Stds. & Reg. Dist	1.40	22.5	7.1	
		(+11%)	(+18%)	(+8%)	-----
MOBILE6	California 1998 Reg. Dist.	0.85	22.1	5.1	
		(-33%)	(+16%)	(-23%)	-----
MOBILE6	Mexican Stds. & Reg. Dist.	1.22	24.7	7.7	
		(-3%)	(+29%)	(+17%)	-----
MOBILE6	California 1998 Reg. Dist. No Defeat Device	0.85	19.4	5.1	
		(-33%)	(+2%)	(-23%)	-----
PART5	California 1998 Reg. Dist.*	-----	-----	-----	1.188
PART5	Mexican Stds. & Reg. Dist.	-----	-----	-----	1.482
					(+25%)

* Closest assumptions to those used in FMCSA for both Mexican and California vehicles

The version of EMFAC2001 currently available could not run a comparison of both Mexican and California fleets.

Because the line-haul Mexican vehicles allowed unrestricted access to California roadways would be among the heaviest (GVW>33,000 lbs) trucks (also called heavy-heavy duty diesel vehicles [HHDDV]) used on the roadways (FHWA, 1997), a more realistic

comparison is to compare emission rates using heavy-heavy duty diesel vehicle emissions. The latest version of EMFAC2001 (2.08) that was available did not allow nonstandard registration distributions for all vehicle ages, so a simulated method was used employing the emission rates and correction factors available in the public documentation for EMFAC2001. From the results shown in Table 6, Mexican trucks produced 3 to 7 g/mile (+15 to 30%) more NO_x and 0.3 to 0.6 g/mile (+25 to 75%) more PM than equivalent California trucks operating in Imperial and other California counties in 2000, depending upon the model used to determine emission rates and the fuel used by Mexican trucks. The gap widens in future years (2010) to 40% more NO_x and 110% more PM per Mexican truck than a comparable California truck.

Table 6. Year 2000 (unless otherwise noted) HHDDV emission comparisons using PART5, MOBILE6, and simulated EMFAC estimates.

Estimates	NOx (g/mile)	PM10 (g/mile)
PART5 California Reg. Dist.	-	1.45
PART5 Mexican Stds. & Reg. Dist.	-	1.78
MOBILE6 California Reg. Dist. *	23.9	-
MOBILE6 California Reg. Dist.	28.2	-
MOBILE6 Mexican Stds. & Reg. Dist.	30.9	-
Simulated EMFAC California Reg. Dist.	21.5	0.78
Simulated EMFAC Mexican Stds. & Reg. Dist.	22.7	1.09
Year 2000 Simulated EMFAC Mexican Stds. & Reg. Dist. (without CA fuel)	24.7	1.35

Year 2010 Simulated EMFAC California Reg. Dist.	13.0	0.35
Year 2010 Simulated EMFAC Mexican Stds. & Reg. Dist. (without CA fuel)	18.3	0.74

* No Defeat Device

MOBILE5 does not permit analysis of HHDDV emissions separate of other HDDV.

The version of EMFAC2001 currently available could not run a comparison of both Mexican and California fleets.

It is expected under the No Action and Proposed action cases that within Imperial County, Mexican trucks would continue driving through Imperial County instead of transferring their loads to California vehicles near the border, resulting in approximately an additional 50 miles of travel within Imperial County by the Mexican line-haul trucks instead of this same mileage being driven by California trucks. In 2000, there were 281,032 northbound truck crossings at Calexico (FMCSA, 2002). The emissions impact of these freight transfers occurring using Mexican line-haul trucks instead of California trucks across Imperial County alone is shown in Table 7, not accounting for any increases in trade or other vehicle activity across the border using a low impact case (using California diesel fuel), and a higher impact case using the more realistic assumption that Mexican vehicles use Mexican fuel. Table 7 reflects the emission increase only in Imperial County; additional emission increases would be expected to occur in all other California Counties.

Table 7. Air Quality impacts on Imperial County in 2000 of Mexican instead of California line-haul trucking.

	NOx (tons/day)	**PM10 (tons/day)**
Low Impact Case (California diesel fuel)	0.13	0.013
Typical Case	0.30	0.026

To compare this to the current emission levels, the emission inventory for Imperial County is shown in Table 8. Table 8 indicates that the emissions increase from allowing access of Mexican line-haul trucking across the county would increase diesel PM by 2.6% overall (0.026 tons per day compared with the emissions inventory of 1.01 tons per day for all diesel engines) or 15% from HDDV trucking (0.026 tons per day compared with the emissions inventory from trucking of 0.17 tons per day), even in the absence of increased vehicle activity.

Table 8. Year 2000 Imperial County emissions (tons per day).

Emissions	**TOG**	**ROG**	**CO**	**NOx**	**SOx**	**PM**	**PM10**
Total all sources	32.40	28.46	171.1 8	37.34	1.72	485.0 7	252.1 1
Total Diesel (Nonroad and Onroad)	17.31	15.82	147.8 5	27.31	1.38	1.02	1.01
Total Highway	12.63	11.63	122.1 7	14.64	0.24	0.39	0.39
HDDV (i.e. Trucks)	0.38	0.33	1.48	4.58	0.15	0.17	0.17

In future years, as the US 2004 and later the 2007 emission standards for heavy-duty truck engines are implemented in California but not in Mexican trucks, the relative disparity between US and Mexican vehicle emissions will be considerably greater.

California Clean Air Plan

One initiative planned under the California Clean Air Plan (CAP) includes a diesel retrofit rule, which will reduce emissions from California registered heavy-duty trucks, but not from out-of-state, Canadian, and Mexican trucks (ARB, 2000).

The rules would require diesel emission control retrofits for refuse haulers, fuel tanker trucks, public and publicly contracted, on-road, and off-road vehicles. Eight-five percent control is expected on 90% of the fleet. The retrofits will likely control PM initially and perhaps NO_x later. These reductions are expected in addition to rules already in place, such as the transit bus and school bus rules.

Table 9. Expected implementation schedule.

Vehicle Fleet	2003	2004	2005	2006	2007
Refuse Haulers	25%	50%	75%	100%	
Fuel Tankers	10%	25%	75%	100%	
Public and Publicly-contracted		10%	25%	75%	100%
Other On-road		10%	25%	75%	100%
Other Off-road		10%	25%	75%	100%

ARB is looking at several different options for implementation. From ARB (2000), a minimum control limit of 85% per vehicle is feasible.

The Clean Air Plan has not yet been formulated for line-haul trucking within California, so we made no estimates in this report concerning the effect this would have on relative Mexican and California truck emissions. However, to the extent that California intends to lower emissions through regulations on California trucking, this will increase the impact that Mexican vehicles will have on air quality in California.

Air Quality Standards

The U.S. EPA has revised the National Ambient Air Quality Standards (*http://www.epa.gov/oar/oaqps/ozpmbro/current.htm*). The revised standards are more stringent for ozone, and there is a new stringent fine particulate matter standard. Based on current ambient air quality levels, most of California is expected to be out of attainment of these stringent ozone and fine PM standards. Increases in California highway emissions of ozone precursors and fine particulate matter from Mexican heavy-duty diesel trucks can only make these standards more difficult for the State of California to meet.

Local Impacts on Toxic Emissions

In the ICF (2001) analysis (cited by FMCSA, 2002) of the environmental impacts of cross-border diesel truck emissions, only five border crossings (three U.S.-Canada. and two U.S.-Mexico crossings) were considered and the analysis focused exclusively on criteria pollutant emissions (NO_x, VOC, CO, PM_{10}, and SO_2). Interestingly, the border crossings analyzed in this report did not include any of the border crossings between Mexico and the State of California, even though the alternative scenario for the Tucson-Hermosillo corridor stated that no trade growth between Sonora and

California will affect the Tucson-Hermosillo corridor because it generally moves through Mexicali-Calexico in Imperial County, California (ICF, 2001).

The State of California has performed a review of ambient toxics and concluded that emissions from diesel engines constitute the majority (about 70%) of the cancer risk due to ambient toxics concentrations in the South Coast Air Basin (SCAQMD, 2000). Diesel engine exhaust contains volatile organic compounds (VOC similar to reactive organic gas (ROG)) constituents that are listed as carcinogens (e.g., acetaldehyde, benzene, and formaldehyde) by the U.S. EPA and the State of California. In addition, diesel particulate matter itself is listed as a pulmonary carcinogen by the State of California and is identified by Federal and State of California agencies to have other noncarcinogenic pulmonary health effects. However, the environmental impact analysis of cross-border truck traffic performed by ICF (2001) or FMCSA (2002) did not consider any impacts from air toxics emissions.

Localized impacts from air toxic emission should be addressed in some local areas since border counties will bear a far larger impact from the proposed increase in diesel truck traffic than the country as a whole (FMCSA, 2002). For border crossings in mainly rural counties such as Imperial County, California, any increase in local air toxic emissions will be even more significant because these emissions reflect a large portion of the overall air toxics emission inventory for these counties. These rural counties will experience a substantial increase in Mexican truck emissions along highly localized transportation routes. Risks resulting from emissions from diesel engine exhaust to populations that work or live near these transportation

corridors will increase with increasing emissions. The impact of air toxics emissions from cross-border truck traffic along these transportation corridors can be estimated at the local level for counties such as Imperial using standard air dispersion modeling and risk assessment methodologies.

Analysis of air toxic emissions due to operation-related emissions such as from vehicular trips are typically required in CEQA analyses[2] and should be done in the National Environmental Policy Act (NEPA) analysis here. The analysis of the impacts for air toxic emissions can be done either on a regional or local scale.

For rural counties like Imperial County, where population centers are small and located near transportation corridors, the impact of air toxic emissions on local populations can be best assessed using a local-scale air dispersion analysis of air toxic emissions. The U.S. EPA's Industrial Source Complex Short Term, Version 3 (ISCST3) model is a straight-line, steady-state Gaussian dispersion model that is commonly used to estimate airborne concentrations due to criteria and air toxic pollutant emissions on a local scale (less than 50 kilometers). At the present time, ISCST3 is EPA's most common regulatory platform for near-field modeling of emissions and is also a preferred air dispersion model for many State and Local agency regulatory applications. ISCST3 provides options to model emissions from mobile sources such as line and area sources. The model considers the following important influences

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[2] For example: 2000. "Notice of Scoping/Initiation of Studies: Interstate 5 Freeway Improvement Study". Letter from Steve Smith, Program Supervisor, CEQA Section of South Coast Air Quality Management District to Ron Kosinski, Chief of the Office of Environmental Planning, Caltrans, District 7. February 15.

on pollutant concentrations: emission rate, physical location and source parameters of the release points, meteorological parameters from the meteorological station nearest to the emission source, and the physical location and height of the user-defined receptor points. The model can estimate air toxic pollutant concentrations at each user-defined receptor location. These predicted air toxic pollutant concentrations can then be used to assess the potential health risk (both for cancer and non-cancer effects) to populations near these transportation corridors using standard risk assessment methodologies and exposure assumptions used in either EPA or California regulatory programs such as the State of California's Air Toxics "Hot Spots" Program (AB 2588).

There are two basic types of inputs that are required to run ISCST3: an input source and control file and a meteorological data file. The input source and control file includes the selected modeling options, source emission rates, source location and parameter data, receptor locations, meteorological data file specifications, and output options. In modeling impacts from diesel truck emissions in Imperial County, it appears that this information is readily available. Receptor locations can be simply modeled as a defined receptor grid in populations centers such as Calexico, El Centro, Imperial, and Brawley (largest distance is about 4 kilometers from Interstate 8 to northern El Centro and, therefore, can be modeled using local air dispersion models) shown in Figure 2. Source locations in these population centers would be the highways where the increase in air toxics emissions from Mexican trucks is expected to occur due to the increased number of Mexican trucks entering the U.S. near the transfer station east of

Calexico (e.g., Interstate 8 and State Highways 86, 98, and 111) as shown in Figure 2. Model inputs for source emissions are discussed in comments above and can be modeled on a mass per mile of highway basis. Several meteorological stations with the meteorological data necessary for air dispersion modeling are also located in the Calexico/El Central/Imperial area as shown in Figure 2.

FMCSA (2002) has completely omitted this kind of analysis, and provided no information on local effects of the No Action and Proposed Actions scenarios. This deficiency does not allow a proper assessment of the air quality impacts.

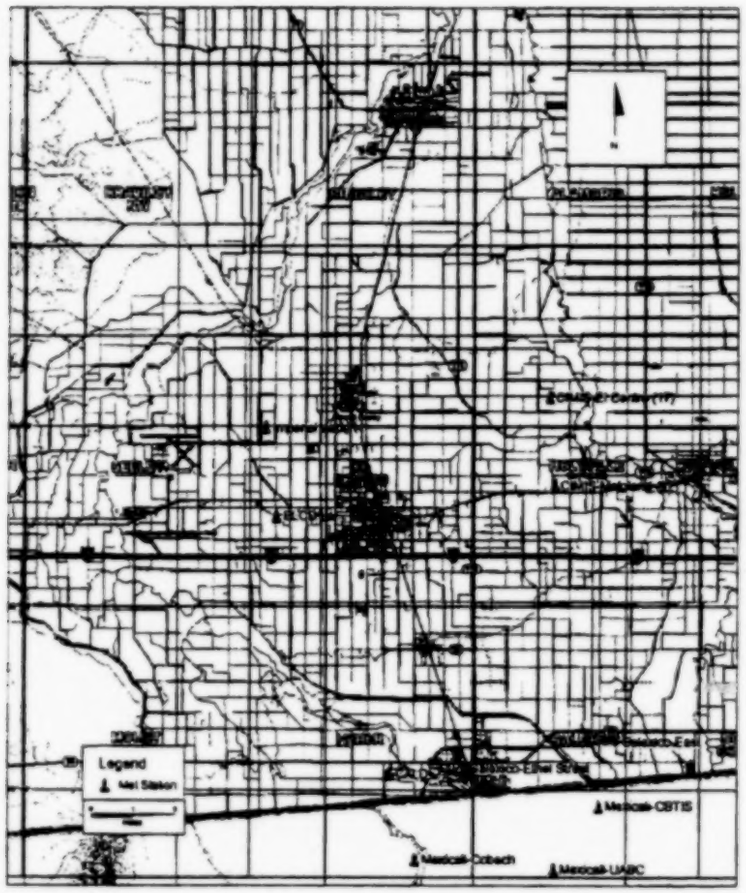


Figure 2. Highways and meteorological stations, Imperial County, California.

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Conclusions

The FMCSA analysis is seriously flawed because it underestimated the emissions impact from the No Action and Proposed Action cases. FMCSA (2002) repeatedly states that their analysis is "conservative." For example, the report states:

> *"The emissions effects and inventories were calculated based on conservative average engine emission factors for Mexican CMV and did not take into account the exclusion of very high emitters. The data and assumptions in this list are generally very conservative so actual emissions from the operation and inspection of Mexican CMV are expected to be significantly lower than those calculated here." FMCSA (2002)*

Far from being conservative, the FMCSA analysis ignored the disparity in emission rates between US, especially California, and Mexican line-haul trucking fleets. FMCSA has ignored several factors which will result in higher emissions in Mexican trucks, and thus underestimates the air quality impacts of the actions analyzed.

Because California/US emissions standards are more stringent than Mexican standards, and because the Mexican fleet is on average older than the US/ California fleet, Mexican truck fleets were expected to have emitted 30% more NO_x and 75% more diesel PM than comparable California truck fleets in 2000. Based on current US and Mexican regulations and legal proceedings (i.e. Consent Decree), the emissions of Mexican trucks operating in California in 2010 are expected to be 40% higher in NO_x and 110% higher in PM. Planned California and Federal efforts to reduce diesel

PM from highway trucking will be ineffectual for the Mexican fleet; as a consequence, over time an even greater fraction of the overall emissions will come from the Mexican fleet.

Diesel exhaust emissions, especially PM, are known to contain air toxics with carcinogenic and noncarcinogenic health effects and may represent the majority of the cancer risk due to ambient toxics concentrations for human populations living and working near transportation corridors. A net emissions increase is noted for the Mexicali-Calexico border crossing due to the use of Mexican instead of California line-haul trucking. In light of these facts and findings, the impacts from air toxics should have been evaluated by FMCSA to inform the public of the potential environmental consequences of these emissions as is required under the NEPA and the CEQA . The localized impacts from this increase in air toxic emissions could have been addressed in FMCSA's (2002) FONSI for counties such as Imperial since the methodologies and the data exist to evaluate these impacts.

We have shown in this report that the Mexican truck fleet will emit more pollutants and more toxic pollutants than comparable California fleets. The State of California will not be able to reduce emissions from these Mexican truck fleets. The disparity between Mexican and California truck fleet emissions will be more significant in the future. The higher emitting Mexican truck fleet means that there will be air quality impacts associated with the unrestricted access of Mexican line-haul trucking to US roadways that were not analyzed in FMCSA (2002).

Emissions from the Mexican trucking fleet can be reduced by using California fuels and by Mexican adop-

tion of US emission regulations and legal proceedings (i.e. Consent Decree). However, the advanced age of the Mexican vehicles will mean that the Mexican truck fleet vehicle will continue to emit at higher rates than comparable California vehicles for some time to come.

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UNITED STATES DISTRICT COURT
NORTHERN DISTRICT OF CALIFORNIA

No. C-02-2115-CW

PUBLIC CITIZEN, ET AL., PLAINTIFFS

v.

UNITED STATES DEPARTMENT OF TRANSPORTATION, ET AL., DEFENDANTS

DECLARATION OF JAMES MICHEL LYONS, IN SUPPORT OF PLAINTIFFS' MOTION FOR A TEMPORARY RESTRAINING ORDER AND PRELIMINARY INJUNCTION

DATE: To Be Determined

TIME: To Be Determined

COURTROOM: The Honorable Claudia Wilken

I, JAMES MICHAEL LYONS, hereby declare:

1. I am a Senior Partner and Senior Engineer at Sierra Research, Inc., a consulting firm that specializes in a wide range of air quality issues, including analyses of vehicle emissions, emissions control technologies, and the associated impacts on air quality. I have been retained by plaintiffs' counsel as an expert witness and make this declaration in support of Plaintiffs' Motion

for a Temporary Restraining Order and Preliminary Injunction.

2. By way of summary, it is my opinion that the Program Environmental Assessment (PEA or EA) at issue in this litigation is seriously deficient in the following respects:

(a) It fails to account for emissions differences between Mexico-domiciled and U.S.-domiciled trucks that exist now and that will become even more significant in the future;

(b) It improperly assesses the air quality impact of the no action and proposed action scenarios by comparing the associated increase in emissions to total nationwide emissions from on-road mobile and all sources;

(c) It fails to assess the air quality impact of increased emissions and increased ambient pollutant levels in those areas where the impacts of the no action and proposed action scenarios are likely to be greatest, which include many areas that currently do not comply with existing federal air quality requirements and are likely to be out of compliance with future federal requirements;

(d) It fails to assess the localized air quality impacts of increased numbers of safety inspections;

(e) It fails to consider increases in emissions of toxic air contaminants resulting from the no action or proposed action alternatives, particularly within the context of the increase in local emissions due to increased numbers of safety inspections; and

(f) It fails to assess the air quality impacts of the no action and proposed action alternatives over more than a single year or beyond 2002.

A. Professional Qualifications

3. In 1983 I received my Bachelors of Science *cum laude* in Chemistry from the University of California, Irvine. In 1985, I received my Masters of Science in Chemical Engineering from the University of California, Los Angeles.

4. From 1985 until 1991, I was employed by the California Air Resources Board in a variety of capacities, including Engineer, Air Pollution Research Specialist, and Senior Air Pollution Specialist. In these positions I analyzed vehicle emissions data for trends and determined the effectiveness of various types of emissions control systems for both regulated and toxic emissions, examined the impact of diesel powered vehicles on ambient levels of toxic air contaminants and assisted in the development of emissions regulations for "gray market" vehicles. I assisted in the identification and control of emissions of toxic air contaminants from mobile sources and also in the determination of effects of compositional changes to gasoline and diesel fuel on emissions of regulated and unregulated pollutants. I developed new test procedures and emission standards for evaporative and running loss emissions of hydrocarbons from vehicles, oversaw the development of the California state plan to control toxic emissions from motor vehicles, and assisted in developing control technologies to reduce emissions of chlorofluorocarbons from motor vehicles.

5. From 1991 to present, my responsibilities at Sierra Research have included, among other things, the

evaluation of the costs, emission benefits, and cost-effectiveness of measures intended to reduce emissions from mobile sources. I have also been involved with the organization and management of testing programs designed to evaluate the effectiveness of motor vehicle emission control programs, including inspection and maintenance programs; the analysis of motor vehicle emissions data; and the development of enhanced testing procedures for motor vehicles. I also provide assessments of the activities of federal, state, and local regulatory agencies with respect to motor vehicle emissions, and report to clients regarding such activities.

6. While at Sierra Research my diverse client base has included petroleum companies and associations (including the Western States Petroleum Association, the American Petroleum Institute, Mobil Corporation, and Texaco, Inc.), vehicle manufacturing associations (including the Alliance of Automobile Manufacturers and the former American Automobile Manufacturers Association), government agencies (including the California Air Resources Board, Environment Canada, the Province of British Columbia Ministry of Environment Lands and Parks and the Greater Vancouver Regional District, and the New York State Energy Research and Development Authority), and other organizations (including Californians For a Sound Fuel Strategy and the Hybrid Vehicle Coalition). I am a member of the American Chemical Society and the Society of Automotive Engineers.

7. In the course of my career, I have authored or co-authored numerous publications analyzing Diesel vehicle emissions, fuels, control technologies, and their impacts on air quality, including the following:

8. "The Impact of Diesel Vehicles on Air Pollution," presented at the 12th North American Motor Vehicle Emissions Control Conference, Louisville, KY, April 1988.

9. "Preliminary Feasibility Study for a Heavy-Duty Vehicle Emissions Inspection Program in the Lower Fraser Valley Area," Sierra Research Report No. 92-10-01, prepared for the Greater Vancouver Regional District, October 1992; and "Phase II Feasibility Study: Heavy-Duty Vehicle Emissions Inspection Program in the Lower Fraser Valley," Sierra Research Report No. SR94-09-02, prepared for the Greater Vancouver Regional District, September 1994.

10. "Analysis of Diesel Fuel Quality Issues in Maricopa County, Arizona," Sierra Research Report No. SR97-12-03, prepared for the Western States Petroleum Association, December 1997.

11. "Future Diesel-Fueled Engine Emission Control Technologies and Their Implications for Diesel Fuel Properties," Sierra Research Report No. SR99-08-01, prepared for the American Petroleum Institute, August 1999.

12. "A Comparative Analysis of the Feasibility and Cost of Compliance with Potential Future Emission Standards for Heavy-Duty Vehicles Using Diesel or Natural Gas," Sierra Research Report No. SR00-02-02, prepared for Californians For a Sound Fuel Strategy, February 2000.

13. "Comparison of Emission Characteristics of Advanced Heavy-Duty Diesel and CNG Engines," Sierra Report No. SR01-05-01, prepared for Western States Petroleum Association, May 2001.

14. A true and correct copy of my curriculum vitae is attached hereto Exhibit 1.

15. At the request of plaintiffs' counsel, Sierra Research was asked to review the Program Environmental Assessment (EA) prepared by the Federal Motor Carrier Safety Administration (FMCSA) considering several proposed actions (hereafter the "Final Rules") that would lift current restrictions that limit operation of Mexico-domiciled heavy-duty diesel vehicles to the immediate border region and thereby increase the number of such vehicles operating in the United States. In co-operation with Philip Heirigs and Lori L. Williams, I reviewed and analyzed the EA, identified serious deficiencies in the FMCSA's air quality impacts analysis contained therein, and then reanalyzed potential air quality impacts, incorporating proper methodologies and assumptions.

16. Mr. Heirigs is a Partner and Senior Professional at Sierra Research, Inc. His responsibilities include preparation of on-road and off-road mobile source emission inventories, evaluation of EPA and CARB emission factor models, and assessment of the costs and benefits of alternative mobile source control measures. Under contract to federal agencies and industry associations, Mr. Heirigs has conducted evaluations of EPA's MOBILE4, MOBILE4.1, MOBILE5a, MOBILE5b, and MOBILE6 emission factors models and CARB's EMFAC/BURDEN models, including detailed analyses of nearly every aspect of MOBILE5 and MOBILE6. Mr. Heirigs has also been responsible for the development of training materials and the delivery of training sessions on the MOBILE5 and MOBILE6 models. His separate efforts have assessed the accuracy of emission inventories developed for a

wide range of Western communities and evaluated the emissions benefits of various motor vehicle control strategies. Prior to joining Sierra Research, Inc., Mr. Heirigs was a Senior Air Pollution Specialist for the California Air Resources Board. A true and correct copy of Mr. Heirigs' curriculum vitae is attached hereto as Exhibit 2.

17. Ms. Williams is an Associate Engineer at Sierra Research, Inc. Her responsibilities include the collection and analysis of data, as well as technical writing support, for a variety of stationary and mobile source emissions projects. Her recent work has included a review of federal, state and local support programs for alternative fuels and alternative fuel vehicles. Other projects have included trip cycle development, I/M program analysis, and statistical analysis of instrumented vehicle data for use in updating the MOBILE5a emission factor model. A true and correct copy of Ms. Williams' curriculum vitae is attached hereto as Exhibit 3.

18. In co-operation with Mr. Heirigs and Ms. Williams, I co-authored a report documenting the review of the EA, the identified deficiencies, and the findings of Sierra Research Inc.'s re-analyses. A true and correct copy of our report is attached hereto as an exhibit to plaintiffs' complaint. This report was submitted to the FMCSA during public comment on the federal rulemaking.

B. The FMCSA's Deficient Environmental Assessment

19. On-road mobile sources include passenger cars and light-duty trucks, motorcycles and heavy-duty vehicles. Among their impacts, on-road mobile sources

significantly contribute to total emissions of volatile organic compounds (VOC), oxides of nitrogen (NO_x), and direct particulate matter (PM) emissions. Heavy-duty Diesel vehicles are of concern from an air quality perspective primarily because they emit substantial amounts of NO_x and PM.

20. Ozone, formed by a complex series of reactions between HC and NO_x in the presence of sunlight, is known to be a strong irritant to the lungs and eyes and at high concentrations causes shortness of breath and also aggravates asthma, emphysema, and other conditions. It is also well known that fine PM can penetrate deep into the lungs where it becomes deposited, causing or aggravating respiratory problems, decreases in lung function, and premature death.

21. The environmental assessment ("EA") prepared by the Federal Motor Carriers Safety Administration ("FMCSA" purports to analyze the potential significance of environmental impacts that may result from the operation of Mexico-domiciled trucks outside of the border region beginning in 2002.

(a) In Section 4 of the EA, the potential impacts of the proposed action on air quality are addressed.

(b) The basic methodology employed in the EA compares emissions from Mexico-domiciled vehicles operating in the U.S. in 2002 under each scenario to total U.S. emissions from *all on-road vehicles in the U.S.* and then to *total emissions from all sources in the U.S.* based on data developed by the U.S. EPA for 1999.

(c) Emissions of Mexico-domiciled vehicles were assumed to be equal to those of U.S.-domiciled vehicles. The numbers of Mexico-domiciled vehicles assumed to be operating in the U.S. under each scenario during 2002 were estimated by FMCSA. These estimates indicate that on the order of 30,000 Mexico-domiciled trucks will begin to operate inside the U.S. beyond the current border areas in 2002 alone.

(d) Emissions associated with proposed safety inspections of Mexico-domiciled vehicles are estimated separately for 2002 using the U.S. EPA MOBILE5b and PART5 emission factor models and are also compared to total U.S. emissions in 1999.

22. The air quality analysis in the EA is fatally flawed due to a number of serious methodological deficiencies and the use of a number of erroneous assumptions. As a result, the methodology used in the EA is completely inappropriate for assessing the relative air quality impacts of the "no action" and "proposed action" scenarios.

23. Among other deficiencies, the EA fails to consider impacts in the proper geographical regions. Second, it fails to evaluate any impacts beyond 2002. Third, it fails to account for differences in emissions between Mexico- and U.S.-domiciled trucks. Fourth, it fails to consider the impacts of emissions of toxic air contaminants.

24. Although we have described these deficiencies in our report in detail, I will summarize some of the basic problems in order to highlight for the Court the extent of the deficiencies in the government's EA.

25. One major defect is the evaluation of the emission impacts of the no action and proposed action scenarios in light of annual *nationwide* emissions from on-road mobile sources and all sources. This approach is completely invalid for the type of analysis in question and its use leads to a dramatic understatement of the significance of air quality impacts.

(a) Air quality issues are typically evaluated under State and federal law for relatively small geographical areas. For example, attainment and nonattainment designations with respect to the various National Ambient Air Quality Standards ("NAAQS") are generally cast in terms of limits on the maximum concentration of pollutants that the public can be exposed to during some period of time. Compliance with the NAAQS is determined for relatively small geographical areas (rather than the United States as a whole) based on air quality monitoring data. Indeed, NAAQS determinations may be limited to areas that represent only a portion of a single county.

(b) The air quality impacts of the proposed action will principally affect localized areas along major trucking corridors which pass through areas that are not in attainment with the current and future ozone and fine PM NAAQS. *It is in these areas where the assessment of impacts needs to be performed.*

26. Another major problem is that the EA analyzes the impact of the no action and proposed action alternatives for only a single year–2002–without any explanation of why this single- year short-term scenario is an appropriate measure of potential air quality

impacts or how this analysis can possibly suffice to assess impacts that will extend into the distant future and will change over time. The government's restricted short-term analysis is simply inadequate to measure the potential significance of air quality impacts, particularly long-term impacts, as we have detailed in our report. Any assessment of the actual impacts of operation of Mexico-domiciled trucks operating in the U.S. needs to consider *both* the short- and long-term impacts, since there are likely to be significant changes in the relative emissions levels and the amount of freight traffic handled by Mexican trucks operating in the U.S. over time. The EA completely ignores these important factors. An appropriate analysis should be carried out over a much longer period extending through 2020, at least.

27. The EA does not properly account for differences in the amount of emissions that results from the per-mile operation of Mexico- and U.S.-domiciled trucks. However, in general, emission levels of Mexico-domiciled trucks have not been, are not now, and will not be the same as those of U.S.-domiciled trucks.

28. In addition, emissions of toxic air contaminants (TAC) from heavy-duty Diesel vehicles are a major air quality concern. TACs that are emitted by Diesel vehicles include directly emitted Diesel particulate matter, benzene, 1,3-butadiene, formaldehyde, and acetaldehyde. The EA improperly failed to consider the issue of increased emissions of TACs whatsoever. As discussed below, Diesel emissions will assuredly increase in certain areas as a result of this action, and emissions of TACs from Diesels will increase as well. The failure to consider TAC impacts runs directly counter to the recent EPA rulemaking setting forth

stringent standards for heavy-duty Diesel vehicles, intended in part to reduce public exposure to TACs. Given this, the impacts of the no action and proposed action alternatives on TAC emissions and ambient TAC levels must be addressed.

29. These are just several of the major defects that invalidate the government's EA with respect to air quality effects.

C. Sierra Research's Analysis of Air Quality Impacts

30. Given the major flaws associated with the EA, we conducted a limited assessment of environmental air quality impacts that would be associated with opening the border to Mexico-domiciled trucks. In conducting this study, we analyzed impacts within two of the geographic areas that will be affected, San Diego and Houston; analyzed both short- and long-term effects through 2020; and focused on emissions of nitrogen oxides, particulate matter, and VOCs. We used latest versions of the state-of-the-art emissions models developed by the United States Environmental Protection Agency (EPA) and the California Air Resources Board (CARB), U.S. EPA MOBILE6 and PART5, and CARB EMFAC2001. The MOBILE/PART and EMFAC emissions models have been developed by these agencies explicitly for the purpose of estimating current and future year emissions from on-road vehicles and are *required* to be used in the preparation of air quality plans for California areas (EMFAC) and other areas of the country (MOBILE/PART).

31. In order to illustrate the potential significance of the problem, we used these models to generate predicted gram-per-mile-traveled emission rates for the average Mexico- and U.S.- domiciled Class 8b heavy-

duty Diesel trucks operated in the San Diego and Houston areas over time. Class 8b trucks are frequently employed in freight hauling over longer distances. Emission rates were calculated for 2002, 2007, 2010, 2015, and 2020.

32. We found that, on average, Mexico-domiciled trucks operating in the San Diego region would presently emit about 1.3 times more NO_x, 1.9 times more particulate matter, and 2.0 times more VOCs than their U.S. counterparts. The emissions control deficit of the Mexican truck fleet will substantially worsen in the next 18 years in the absence of actions to apply the same emissions standards that will apply to U.S. trucks to Mexican trucks. By 2020, the average Mexican truck operating in the San Diego area will emit about 4.3 times more NO_x, 4.0 times more particulate matter, and 3.1 times more VOCs than its U.S. counterpart.

33. Using a similar analysis for the Houston area, we found that the average Mexican truck would presently emit about 1.3 times more NO_x, 2.9 times more particulate matter, and 3.0 times more VOCs than its U.S. counterpart. Again, the emissions control deficit of the Mexican truck fleet will grow substantially in the next 18 years unless actions are taken to apply existing U.S. emission regulations to Mexican trucks. By 2020, the average Mexican truck operating in Houston will emit about 6.7 times more NO_x, approximately 4 times more particulate matter, and 2.0 times more VOCs than its U.S. counterpart.

34. These differences in emissions have serious implications for the air quality within affected regions. It is highly likely that the increased Diesel emissions caused by Mexico-domiciled trucks operating in many areas will be in excess of the conformity thresholds

established by the U.S. EPA to prevent federal actions from causing substantial delays in or preventing nonattainment areas from achieving compliance with existing federal air quality requirements.

(a) For example, based our assumptions the operation of Mexico-domiciled trucks in the Houston area, which is a severe ozone nonattainment area for ozone, would increase NO_x emissions by about 35 tons per day in 2007, 42 tons per day in 2010, and 48 tons per day by 2020. In 2007, these NO_x increases exceed the 0.07 ton per day conformity threshold value for NO_x emissions in severe ozone nonattainment areas, by approximately 500 times (35 tons per day/0.07 tons per day).

35. In San Diego, which is a serious ozone nonattainment area, the operation of Mexico-domiciled trucks would, based on our assumptions, increase NO_x emissions by about 8 tons per day in 2007, exceeding the 0.14 ton per day conformity analysis threshold that applies in serious ozone nonattainment areas by a factor of approximately 50.

36. In the South Coast Air Basin (including the Los Angeles area), which is an extreme ozone nonattainment area and a serious PM_{10} nonattainment area, the operation of Mexico-domiciled trucks in the South Coast Air Basin would, based on our assumptions, increase NO_x emissions by more than 50 tons per day in 2010, exceeding the 0.03 ton per day conformity threshold by a factor of approximately 1,700. Their operations could increase direct PM_{10} emissions by about 1.2 tons per day in 2010, compared to the conformity threshold of 0.19 tons per day.

37. In sum, the federal government's conclusion that there will be no significant air pollution effects from its

action and that a PEA was the appropriate vehicle for examining these impacts is erroneous. The implementation of the regulations may have potentially significant impacts on air quality, as well as serious impacts on the ability of many areas to attain and maintain compliance with federal air quality standards in many areas.

I hereby declare, under penalty of perjury under the laws of the United States and the State of California, that the foregoing is true and correct. Executed this *29th* day of April, 2002, at Sacramento, California.

/s/ JAMES MICHAEL LYONS
JAMES MICHAEL LYONS

SIERRA RESEARCH
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May 20, 2002

Document Management Facility
U.S. Department of Transportation
Room PL-401
400 Seventh Street, SW
Washington, D.C. 20590-0001

Re: Docket No. FMCSA-2001-11060; Certification of Safety Auditors, Safety Investigators, and Safety Inspectors, Interim Final Rule; Request for Comments, 67 Fed. Reg. 12,776 (March 19, 2002)

Re: Docket No. NHTSA-02-11592; Notice 1, Record Keeping and Record Retention, Notice of Proposed Rule Making (NPRM), 67 Fed. Reg. 12,800 (March 19, 2002)

Re: Docket No. NHTSA-02-11593; Notice 1, Importation of Commercial Motor Vehicles, Notice of Proposed Rule Making (NPRM), 67 Fed. Reg. 12,806 (March 19, 2002)

Dear Sir or Madam:

This letter is intended to transmit our expert opinions on two issues that are of concern to our clients. I understand that our background and experience are detailed elsewhere in the record.

The first issue is whether or not the FMCSA's EA analyzes the feasibility of examining Mexican domiciled trucks at border crossings in order to determine their compliance with U.S. emissions regulations at the time of manufacture. While the EA considers the issue of determining compliance of Mexican domiciled vehicles with U.S. safety requirements in detail, it does not, in our opinion, consider in anyway the issue of determining compliance of Mexican domiciled vehicles with U.S. emission regulations. Clearly, this issue should have been thoroughly addressed in the EA before a Finding of No Significant Impact was made.

The United States Environmental Protection Agency has required that new heavy-duty Diesel engines be certified to specific exhaust emission standards for more than 25 years. These standards have become increasingly stringent over time. As a result, engines produced in different model-years may have been certified to different emission standards. It is technically possible to identify heavy-duty Diesel truck engines that have been certified to U.S. standards via labels that are affixed to the engines (rather than the vehicles in which the engines are installed) pursuant to EPA regulations. The current labeling regulations are found at §86.092-35 of Title 40, Code of Federal Regulations and subsequent modifications to that section. The labels are placed on the engines rather than on the vehicles themselves (as is the case with lighter vehicles) because, in general, engines are sold by their manufacturers to separate truck builders who then install engines, sometimes from several different manufacturers, into the truck cabs they produce.

To the extent that Mexican domiciled vehicles were originally produced and sold in the U.S., it would be

possible identify those vehicles if each and every truck was checked by an inspector each time it crossed the border. This inspector would need access to the engine of the truck and verify that the U.S. EPA emissions label was present.

For Mexican-domiciled trucks that were originally produced for sale in Mexico, rather than the United States, the issue of verifying is much more complicated. First, emission standards for U.S. and Mexican heavy-duty Diesel engines have only been equivalent from the 1993 model-year to present and will diverge again with the 2004 model-year (and, in actuality, sooner based on settlement agreements between engine manufacturers and the U.S. EPA.).

For Mexican domiciled trucks with pre-1993 model-year heavy-duty Diesel engines not certified by the U.S. EPA and originally sold in the United States, it will be very difficult to demonstrate emissions equivalency with comparable U.S. vehicles. Prior to the 1993 model-year, emissions from new heavy-duty Diesel engines were not regulated in Mexico and, as indicated in Table 2 of our recent study,* we believe that engines used in Mexican trucks were not equivalent to engines used in U.S. trucks of the same model-year in terms of emission levels.

In summary, the demonstration of emissions equivalency is a complicated issue of considerable importance that should have been evaluated in the EA but was not.

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* "Critical Review of 'Safety Oversight for Mexico-Domiciled Commercial Motor Carriers, Final Programmatic Environmental Assessment,' Prepared John A Volpe Transportation Systems Center, January 2002", Sierra Research Report No. SR02-04-01, April, 16, 2002.

The second issue of concern is what impact on overall emissions there might be if some or many of the heavy-duty truck engines and/or complete vehicles used in Mexico are made in the U.S. and then sold for installation on trucks sold and used in Mexico.

It is important to note that, at present, engines installed in Mexican trucks do not appear to be subject to two sets of more stringent emission standards that apply to U.S. trucks beginning with the 2004 and 2007 model-years. At present, Diesel engines sold in the U.S. and Mexico can, in many cases, comply with applicable emission regulations without the use of components whose sole purpose is to reduce emissions.

In order to comply with the 2004 model-year U.S. engine standards, manufacturers will, in general, be required to incorporate exhaust gas recirculation (EGR) systems into their engines. EGR systems typically involve passage ways and valves (either internal or external to the engine itself) for returning exhaust gases from the exhaust manifold to the intake manifold and as a system that allows the amount of exhaust gas that is returned, as well as the engine operating conditions under which gas is recirculated to be controlled. Addition of EGR systems will increase the cost of heavy-duty Diesel engines.

The primary purpose of EGR systems is to lower NO_x emissions. Such systems provide no improvement in engine power, operability, durability, or fuel economy. In fact, the use of EGR systems on heavy-duty Diesel engines has raised considerable concern regarding decreased engine durability. Given that EGR systems will increase the cost of engines and potentially adversely affect engine durability without providing any benefits other than reduced NO_x emissions, it is un-

likely that manufacturers will incorporate EGR systems into engines sold in countries like Mexico if there are no regulations requiring the additional reductions in NO_x emissions that the systems provide.

In order to comply with the 2007 model-year U.S. engine standards, manufacturers are required to design emissions after-treatment devices capable of achieving nominally 90% reductions in engine out levels of PM and NO_x. It appears that catalytic particulate traps (larger filters that are placed in the exhaust system to trap particulate emissions that are then burned in some manner using catalytic techniques of different types) will be used to reduce PM emission levels to the degree necessary to comply with the standards. NO_x reductions will be achieved with either selective catalytic reduction systems or lean-NO_x adsorber catalysts. Again, these devices must also be added to the engines exhaust system. These after-treatment control systems will be designed for use only with Diesel fuels that contain a maximum of 15 parts per million (ppm) of sulfur.

The application of after treatment control devices to heavy-duty Diesel engines will increase the cost of Diesel engines by at least several thousand dollars and increase truck operating costs. The hardware devices provide no benefit (such as improved fuel economy, engine durability or increased power) other than reduced emissions. To the contrary, these devices will tend to reduce engine power because they increase exhaust back pressure. The use of Diesel fuels with sulfur levels in excess of 15 ppm will reduce the effectiveness of the after-treatment devices and may in some cases permanently damage them.

In our opinion, it is unlikely that these after treatment control devices will be included on engines sold in countries where they are not required to comply with the host country's emission standards or in countries where the maximum allowable limit on Diesel fuel sulfur content is greater than 15 ppm.

Thank you for including these comments in the docket.

Sincerely,

/s/

James M. Lyons
Senior Partner

UNITED STATES DISTRICT COURT
NORTHERN DISTRICT OF CALIFORNIA

No. C-02-2115-CW

PUBLIC CITIZEN, ET AL., PLAINTIFFS

v.

UNITED STATES DEPARTMENT OF TRANSPORTATION, ET AL., DEFENDANTS

DECLARATION OF DALE HATTIS, PH.D,. IN SUPPORT OF PLAINTIFFS' MOTION FOR A TEMPORARY RESTRAINING ORDER AND PRELIMINARY INJUNCTION

DATE: To Be Determined

TIME: To Be Determined

COURTROOM: The Honorable Claudia Wilken

I, Dale Hattis, declare as follows:

1. I am a professional environmental scientist who has special expertise in the methodology for conducting quantitative health risk assessments for cancer and non-cancer health effects. I have been involved, either as a preparer or peer-reviewer, in numerous studies to determine the aggregate human health impacts of a wide variety of substances, and the risks and benefits of altering exposures to those substances. These have

included studies to determine the effects of heavy-duty diesel engine emissions. I have been retained by plaintiffs' counsel as an expert witness and make this declaration in support of Plaintiffs' Motion for a Temporary Restraining Order and Preliminary Injunction.

2. In summary, it is my opinion that the increased emissions from Mexico-domiciled trucks (especially the fine particulate matter in these emissions) that are expected to result from the implementation of the federal regulations at issue in this lawsuit present a significant public health risk that should be fully evaluated in an Environmental Impact Statement before this federal action takes effect. Careful epidemiological comparisons of death rates among cities with different levels of fine particles in their air indicate that moderate (10 $\mu g/m^3$) differences in fine particle air pollution are associated with approximately a 4% difference in overall mortality—with a concentration in cardiovascular causes of death [Pope, C. A. 3rd, Burnett, R. T., Thun, M. J., Calle, E. E., Krewski, D., Ito, K., and Thurston, G. D. 2002 "Lung cancer, cardiopulmonary mortality, and long-term exposure to fine particulate air pollution," Journal of the American Medical Association March 6, 287(9):1132-1141]. Overall, these results indicate that fine particle air pollution is the single largest environmental public health problem at present in the United States. In aggregate it is expected that moderate decreases in these levels could prevent tens of thousands of premature deaths per year, predominantly from cardiovascular conditions. On the other hand, the increased emissions of fine particulate matter from Mexico-domiciled trucks can be expected to translate into incremental increases in premature deaths, an

enhanced incidence of respiratory diseases, numerous lost work days and increased health care costs.

3. It is also my opinion that the federal government certainly has the wherewithal to perform a reasonable yet comprehensive health risk assessment as part of an EIS and that this should be accomplished so that the public and decisionmakers will know the full consequences of implementing the regulations that will allow more open access to Mexico-domiciled trucks.

A. Professional Qualifications

4. I received my Ph.D. in genetics from Stanford University in 1974 and my B.A. in biochemistry from the University of California at Berkeley in 1967.

5. For the past 12 years I have served on the faculty of Clark University as a Research Professor and Research Associate Professor with the Center for Technology, Environment and Development ("CENTED") of the George Perkins Marsh Institute in Worcester, Massachusetts. Prior to coming to Clark University, for sixteen years I was a Research Associate and Principal Research Associate at the Center for Technology, Policy and Industrial Development at Massachusetts Institute of Technology, Cambridge, Massachusetts. I have also been a Visiting Senior Lecturer at University of California at Irvine.

6. For the past twenty-seven years I have been engaged in the development and application of methodologies to assess the health, ecological, and economic impacts of regulatory actions. My work has focused on the development of methodology to incorporate data on variability in susceptibility among individuals into quantitative assessments for both cancer and non-cancer health risks.

7. I have conducted quantitative risk assessments for hearing disability in relation to noise exposure, renal effects of cadmium, reproductive effects of ethoxyethanol, neurological effects of methyl mercury and acrylamide, and chronic lung function impairment from coal dust, four pharmacokinetic-based risk assessments for carcinogens (for perchloroethylene, ethylene oxide, butadiene, and diesel particulates), an analysis of uncertainties in pharmacokinetic modeling for perchloroethylene and an analysis of differences among species in processes related to carcinogenesis.

8. I have been a Councilor and was recently named a Fellow of the Society for Risk Analysis, and I serve on the editorial board of its journal, "Risk Analysis."

9. I have had extensive prior involvement with diesel health risk issues. For example, in March 1998 I presented a report as an invited comment before the Scientific Advisory Panel that was reviewing an official OEHHA risk assessment for diesel particulates in preparation for advising the California Air Resources Board on the designation of diesel particulates as a toxic air contaminant.

10. I have peer reviewed the U. S. Environmental Protection Agency's Carcinogen Assessment Group (CAG) efforts to develop a diesel health risk assessment for diesel exhaust; I prepared a report for National Institute for Occupational Safety and Health (NIOSH) on the possible use of some short term measurements to investigate rates of possible long term lung damage from diesel engines in underground mines; and I reviewed a risk assessment done by NIOSH based on animal tumor data and later published a paper related to a project for the U.S. Environmental Protection

Agency to develop better methods to project human cancer risks from diesel particles from animal data.

11. I have served as a consultant to the U. S. Environmental Protection Agency's "Clean Air Scientific Advisory Committee" (which was then reviewing an EPA staff draft health assessment document for diesel particles), as a peer reviewer for the U. S. Occupational Safety and Health Administration (OSHA) of a plan by NIOSH for an epidemiological study of diesel-exposed workers in non-metal mines and again at OSHA's request as a peer reviewer of the risk assessment portion of a draft document by the U. S. Mine Safety and Health Administration (MSHA) relating to diesel- risk exposures of metal and non-metal miners. I also served at the request of the Health Effects Institute as a peer reviewer for a report by a panel of theirs on diesel epidemiology.

12. I have served as a litigation consultant on diesel-emissions cancer risks and also to assess the risks from radiation exposure and hexavalent chromium that resulted from discharges to the Columbia River from the various reactors and associated facilities in Hanford, Washington.

13. I currently serve on an EPA panel regarding risk assessment methodology. My complete resume, which is attached as Exhibit 1, lists 170 publications.

B. The Methodology for Assessing the Health Risks of Diesel Emissions from Mexico-Domiciled Trucks

14. I have been retained by plaintiffs' counsel to provide an analysis of the aggregate health risks to the population that are posed by the increased diesel emissions that are expected to be released from

Mexico-domiciled truck engines that may shortly be allowed to operate throughout the United States as a result of ongoing federal rulemaking by the FMCSA.

15. By way of background, comprehensive research studies indicate that inhalation exposure to the fine particulate matter in the air such as that emitted by diesel engines may cause acute and chronic non-cancer respiratory effects, including mortality [C. A. Pope 3rd, D. V. Bates, and M. E. Raizenne, "Health Effects of Particulate Air Pollution: Time for Reassessment?" *Environmental Health Perspectives* 103, 472-480 (1995); J. Schwartz, "Air Pollution and Daily Mortality. A Review and Meta-Analysis," *Environmental Research* 64, 36-52; J. M. Samet, S. L. Zeger, F. Dominici, F. Curriero, I. Coursac, D. W. Dockery, J. Schwartz, and A. Zanobetti, "The National Morbidity, Mortality, and Air Pollution Study Part II: Morbidity and Mortality from Air Pollution in the United States," Health Effects Institute, November 2000]. Recently, a Harvard group has reported the results of using information on the chemical composition of fine particulates to separate the contributions of mobile sources, coal burning, and crustal weathering to the excess daily mortality associated with $PM_{2.5}$ exposures [F. Laden, L. M. Neas, D. W. Dockery, and J. Schwartz, "Association of Fine Particulate Matter from different Sources with Daily Mortality in Six U.S. Cities," *Environmental Health Perspectives* 108: 941-947 (2000)]. They find that a 10 $\mu g/m^3$ exposure to mobile source $PM_{2.5}$ is associated with a 3.4% increase in daily mortality (95% confidence interval 1.7-5.2%), in contrast to the smaller 1.1% response indicated for coal combustion $PM_{2.5}$ particles particulates (95% confidence interval 0.3% - 2.0%) and no detected response to $PM_{2.5}$ of crustal origin. There is thus

limited information that indicates that airborne particles emitted by mobile sources (of which diesels account for a major fraction) are no less potent, and appear likely to be more potent in inducing short term changes in mortality than airborne particles originating from other sources of emission. There is also considerable scientific evidence indicating that diesel emissions increase lung cancer risk [Dawson, S. V., and Alexeef, G. V. (2001) "Multi-stage model estimates of lung cancer risk from exposure to diesel exhaust, based on a U. S. railroad worker cohort," *Risk Analysis* 21(1):1-18; Gerde, P., Muggenburg, B. A., Lundborg, M., and Dahl, A. R. "The rapid alveolar absorption of diesel soot-adsorbed benzo(a)pyrene: bioavailability, metabolism and dosimetry of an inhaled particle-borne carcinogen," *Carcinogenesis* 22:741-749; Larkin, E. K., Smith, T. J., Stayner, L., Rosner, B., Speizer, F. E., and Garshick, E. (2000) "Diesel exhaust exposure and lung cancer: Adjustment for the effect of smoking in a retrospective cohort study," *Am J. Ind. Med.* 38:399-409; Lipsett, M., and Campleman, S. (1999) "Occupational exposure to diesel exhaust and lung cancer: A meta-analysis," *Am J. Public Health* 89:991-993]. Indeed, diesel engine exhaust is listed under California's Proposition 65 as a chemical "known to the state to cause cancer." 22 C.C.R. §12000(b). Other conditions believed to be caused by diesel and other fine particles in the air include interactions with the processes mediating asthma and other respiratory symptoms [Nordenhall, C., Pourazar, J., Ledin, M. C., Levin, J. O., Sandstrom, T., and Adelroth, E. (2001) "Diesel exhaust enhances airway responsiveness in asthmatic subjects," 17(5):909-915; Zemp, E., Elsasser, S., Schindler, C., Kunzli, N., Perruchoud, A.P., Domenighetti, G., Medici, T., Ackermann-Liebrich, U., Leuenberger, P., Monn, C.,

Bolognini, G., Bongard. J.P., Brandli, O., Karrer, W., Keller, R., Schoni, M.H., Tschopp, J.M., Villiger, B., Zellweger, J.P. (1999) "Long-term ambient air pollution and respiratory symptoms in adults (SAPALDIA study). The SAPALDIA Team," *Am. J. Respir. Crit. Care Med.* 159 (4 Pt 1):1257-1266], impairment of lung function [Schindler, C., Kunzli, N., Bongard, J. P., Leuenberger, P., Karrer, W., Rapp, R., Monn, C., and Ackermann-Liebrich, U. (2001) "Short-term variation in air pollution and in average lung function among never- smokers. The Swiss Study on Air Pollution and Lung Diseases in Adults (SAPALDIA)," *Am. J. Respir. Crit. Care Med.* 163 (2):356-361], increases in the blood level of the clotting factor, fibrinogen, [Schwartz, J. (2001) "Air pollution and blood markers of cardiovascular risk," *Environmental Health Perspectives* 109 (suppl 3):405-409], and decreases in the variability of heart rates [Creason, J., Neas, L., Walsh, D., Williams, R., Sheldon, L., Liao, D., and Shy, C. (2001) "Particulate matter and heart rate variability among elderly retirees: the Baltimore 1998 PM study," *J. Expo. Anal. Environ. Epidemiol.* 11(2):116-122; Pope, C. A. 3rd (2000) "What do epidemiologic findings tell us about health effects of environmental aerosols?" *J. Aerosol Med.* 13(4):335-54, Magari, S. R., Hauser, R., Schwartz, J., Williams P. L., Smith, T. J., and Christiani, D. C. (2001) "Association of heart rate variability with occupational and environmental exposure to particulate air pollution," *Circulation* 104(9):986-991]. The three last mentioned effects-lung function decrease, increase in serum fibrinogen, and decreased heart rate variability–tend to reinforce the conclusion that the connection between fine particle exposures and cardiovascular mortality is causal, because each of them has been shown in prospective epidemiological studies to be an

independently predictive risk factor for general cardiovascular mortality [Knuiman, M. W., James, A. L., Divitini, M. L., Ryan, G., Bartholomew, H. C., and Musk, A. W. (1999) "Lung function, respiratory symptoms, and mortality: results from the Busselton Health Study," *Ann. Epidemiol.* 9(5):297-306; Folsom, A. R., Wu, K. K., Rosamond, W. D., Sharrett, A. R., and Chambless, L. E. (1997) "Prospective study of hemostatic factors and incidence of coronary heart disease: the Atherosclerosis Risk in Communities (ARIC) Study," *Circulation* 96(4):1102-1108; Kannel, W. B. (1997) "Influence of fibrinogen on cardiovascular disease," *Drugs* 54 Suppl 3:32-40; Kelleher, C. C. (1992) "Plasma fibrinogen and factor VII as risk factors for cardiovascular disease," *Eur. J. Epidemiol.* 8 Suppl 1:79- 82; Tsuji, H., Venditti, F. J. Jr., Manders, E. S., Evans, J. C., Larson, M. G., Feldman, C. L., and Levy, D. (1994) "Reduced heart rate variability and mortality risk in an elderly cohort. The Framingham Heart Study," *Circulation* 90(2):878-883].

16. In attempting to roughly quantify the health effects of the proposed federal activity, I first needed to know the increases in emissions that can be expected from the increased presence of Mexico-domiciled trucks within the United States. I then translated these increased emission figures into increased exposures of the U.S. population to the fine particulate matter that is emitted as diesel exhaust. I then calculated the additional increment in health problems that can be expected as a result of such increased exposures.

17. With respect to the increases in emissions levels that can be expected to result from the new federal rulemaking, I have performed no independent calculations myself but am instead relying upon the Sierra

Research Report prepared by Dr. Lyons covering expected changes in emissions for the San Diego and Houston areas only. If in future work, the Sierra researchers extend their emissions assessment nationally, it should be expected that the total expected change in emissions and associated health impacts will increase.

18. With respect to the human exposures that are likely to occur from these increased emissions, and the risk calculations assessing the variety of health problems that can be expected from these increase exposures, I am relying for the most part on modest adaptations of the results of a regulatory impact analysis concerning heavy duty diesel engines that was prepared and published in December 2000 by the U.S. Environmental Protection Agency ("EPA"), Office of Transportation and Air Quality, Assessment and Standards Division. EPA's analysis, which is entitled "Regulatory Impact Analysis: Heavy-Duty Engine and Vehicle Standards and Highway Diesel Fuel Sulfur Control Requirements" (EPA 420-R-00-026). This extensive report was designed to assess the societal impact of requiring certain modifications to heavy duty diesel engine emissions control technology and fuel standards starting in 2007.

19. In the cost/benefit analysis for its 2007 rulemaking, EPA estimates that requiring cleaner diesel engine technology and also requiring the use of low sulfur fuel will reduce the generation of fine particulate matter nationwide by approximately 109,000 tons per year by the time this new generation of diesel engines has completely replaced the old engine fleet (expected to be in the year 2030).

20. EPA also estimates that this reduction in particulate pollution will be associated with approxi-

mately 8,300 fewer premature deaths per year than would otherwise occur. In other words, removing particulate matter from the atmosphere will translate directly into saved lives. EPA makes similar calculations not only for reduced deaths but also for other health impacts such as acute bronchitis in children, chronic bronchitis in adults, hospital admissions for adults over 64 for pneumonia and chronic obstructive pulmonary disease, hospital admissions and emergency room visits for asthma, total asthma attacks, and work loss days and minor restricted activity days for adults age 18-65.

21. Using these same data, through simple multiplication and division I then calculated the changes in morbidity and mortality that could be expected per year per change in tons of particulate matter emitted each year. I then adjusted these rates to account for differences in the expected population of the United States between the present and 2030.

22. After calculating and adjusting these figures, I then converted the change in emissions data estimated in the Sierra Research Report for the San Diego and Houston areas only from tons per day (as in the Report) into tons per year (as per EPA's analysis), and then multiplied these figures by the expected changes in each category (e.g., deaths, bronchitis, pneumonia) per year per change in tons of diesel particles emitted.

C. The Health Risks Posed by Diesel Emissions From Mexico-Domiciled Trucks

23. My conclusions are that the increase in fine particulate matter estimated to result by the year 2007 in the Houston and San Diego areas alone from Mexico-domiciled trucks will translate directly into premature

deaths, increased cases of disease, numerous lost work days and increased health care costs. More particularly, *I would expect an annual impact of dozens of increased deaths, hundreds of additional asthma attacks, thousands of days of lost work, and tens of thousands of days of restricted activity in adults each year as a result of the increased emissions. There would also be several dozen increased cases per year of chronic bronchitis in adults and numerous additional hospital admissions due to pneumonia, cardiovascular problems, chronic obstructive pulmonary disease, and asthma.*

24. Aside from assuming the validity of the emissions changes in the Sierra Research Report, my preliminary numerical results also assume that:

(a) diesel fine particulate emissions have the same potency as PM 2.5. All are very small particles; diesel particulates are smaller than average and penetrate well into the deep lung. EPA made a similar assumption in its 2007 rulemaking analysis; moreover data from Laden et al. (2000), discussed in paragraph B2 above indicate that at least for the acute mortality effects, fine particles originating from mobile sources (including diesel particles) appear, if anything, more potent than fine particles originating from other types of sources (including crustal weathering and coal fired power plants);

(b) the dose/response relationships for the modest percentage changes in ambient fine particle exposures are well approximated by incremental linear relationships [This is reasonable because it is a well known mathematical result that even though a function may be highly nonlinear, it can be approximated by a straight

line over a very limited range of the independent variable (air concentration in this case)];

(c) the transport and exposure patterns produced by emissions from the San Diego and Houston areas are similar to the national patterns of emissions and exposures modeled in EPA's 2007 rulemaking analysis [while this assumption clearly has some potential to introduce inaccuracies in the exposure assessment, because the prevailing winds are from the West to the East in the United States, much of the nation is likely to be down wind of San Diego and Houston most of the time. Therefore, with the long range transport expected for the fine particles emitted by diesel engines, the national ratio of inhalation to emissions from San Diego and Houston would not differ greatly from the typical national pattern used in EPA's 2007 analysis];

(d) the background levels of pollution in 2007 will be similar to those envisioned by EPA in its 2007 rulemaking analysis for the year 2030.

25. Therefore the estimates I have provided above, while a rough approximation, are nevertheless reasonable estimates of the overall health impacts that are likely to result from the increased emissions that are discussed in the Sierra Research Report. I declare under penalty of perjury under the laws of the State of California that the foregoing is true and correct. Executed this 30th day of April, 2002, at Arlington, Virginia.

/s/ DALE HATTIS, PH.D.
DALE HATTIS, PH.D.

UNITED STATES DISTRICT COURT
NORTHERN DISTRICT OF CALIFORNIA

Docket No. C02-2115-CW

PUBLIC CITIZEN, INTERNATIONAL BROTHERHOOD OF TEAMSTERS, BROTHERHOOD OF TEAMSTERS, AUTO AND TRUCK DRIVERS, LOCAL 70; CALIFORNIA LABOR FEDERATION, CALIFORNIA TRUCKING ASSOCIATION, AND ENVIRONMENTAL LAW FOUNDATION, PLAINTIFFS

v.

DEPARTMENT OF TRANSPORTATION, FEDERAL MOTOR CARRIER SAFETY ADMINISTRATION, JOSEPH M. CLAPP, AND NICHOLAS R. WALSH, DEFENDANTS

DECLARATION OF ALISON K. POLLACK IN SUPPORT OF AMICUS CURIAE MEMORANDUM OF POINTS AND AUTHORITIES

I, ALISON K. POLLACK, declare:

1. I am a Principal at ENVIRON International Corporation ("ENVIRON"), which is well known for its extensive experience in the development and application of emission inventory, photochemical, particulate matter, and visibility air quality models for assessment of ozone and particulate matter issues. I have personal knowledge of the facts set forth herein and if called as a witness, I could and would competently testify thereto.

2. ENVIRON has been retained by the Office of the California Attorney General to serve as a technical consultant for the review and evaluation of the January

16, 2002 Final Programmatic Environmental Assessment ("EA") which has been prepared and issued by defendant Federal Motor Carrier Safety Administration. In this regard, ENVIRON has prepared and submitted to defendants a technical evaluation of defendants' EA.

3. My field of specialization includes extensive technical and managerial experience in the analysis of emissions inventories and models. My primary expertise is in the analysis of on-road and off-road mobile source emissions and emission models, on-road and off-road mobile source control programs, and environmental statistics. I am also nationally recognized for my expertise in the data and analysis methods used to evaluate vehicle emissions test programs and to develop both on-road and off-road mobile source emission factor models. I have served on two National Academy of Sciences (NAS) Committees—Review of EPA's Mobile Source Emissions Factor Model (MOBILE), and Effectiveness of Vehicle Emission Inspection and Maintenance Programs.

4. My educational background includes a B.S. degree in statistics from Princeton University and a M.S. degree in statistics from the University of Wisconsin. I am also a member of the American Statistical Association and have authored and co-authored numerous technical publications concerning mobile-source emissions modeling. A true and correct copy of my resume which further describes my qualifications is attached hereto as Exhibit "A".

5. ENVIRON is a 450-person health and environmental consulting firm with offices throughout the United States and several offices in Europe and Asia. Founded in 1982, ENVIRON has gained a national

reputation as a leader in the areas of environmental strategic analysis, regulatory compliance assurance, environmental and public health risk assessment, and risk management. Our multi-disciplinary staff is comprised of experts in air, water, and soils science and engineering, and includes environmental and chemical engineers, air scientists, hydrogeologists, toxicologists, chemists, industrial hygienists, other environmental and public health scientists, and regulatory and policy experts. ENVIRON's wide array of private and public sector clients includes federal regulatory agencies and policy arms and state and local governments throughout the U.S. as well as some of the nation's largest public and private companies and leading law firms, industrial trade associations, plaintiffs and defendants in toxic tort litigation, real estate developers, and insurance professionals.

6. As a result of the North American Free Trade Agreement (NAFTA), Mexican trucks, which until now have not been allowed to operate within California except within very limited commercial zones, will soon be allowed to drive on California roadways. The purpose of this declaration is to provide for the Court an overview of the environmental impacts of allowing Mexican trucks to operate on California roadways. ENVIRON reviewed the air quality analysis of the environmental impacts of cross-border diesel truck emissions performed in support of the Federal Motor Carrier Safety Administration's (FMCSA's) Finding of No Significant Impact (FONSI) and EA[1], and found

[1] "Finding of No Significant Impact, Safety Oversight for Mexican Domiciled Commercial Motor Carriers; Final Programmatic Environmental Assessment," US Department of Transportation, Federal Motor Carrier Safety Assessment, Prepared by

many shortcomings.[2] A true and correct copy of ENVIRON's technical report, dated April 18, 2002, is attached hereto as Exhibit "B." This document summarizes key findings from that review, and puts them into the context of current and in progress California and federal air quality regulations.

Diesel exhaust emissions pose a health threat to Californians

7. The impact of diesel emissions on air quality in California has been well documented in numerous research studies and identified as a serious health concern by major air pollution control agencies in California. On August 27, 1998, the California Air Resources Board (CARB) identified diesel particulate emissions as a Toxic Air Contaminant (TAC), thus ending a near-decade long investigation into the health effects of exposure to diesel exhaust.[3] The U.S. Environmental Protection Agency will shortly also declare diesel exhaust to be a TAC.[4] An extensive study of localized impacts of diesel and other toxic pollutants was conducted in Southern California during 1998-1999 and found that the contribution to cancer risk is dominated by mobile sources, with more than 70 percent of all risk

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the John A. Volpe National Transportation Systems Center, January, 2002.

[2] ENVIRON, "Review of emissions increases with Mexican heavy-duty diesel trucks operating in California and elsewhere in the U.S.," April 18, 2002.

[3] California Environmental Protection Agency, Air Resource Board Meeting, August 27, 1998, Sacramento, California.

[4] Chris Grundler, Deputy Director, Office of Transportation and Air Quality. Keynote speaker at 12th CRC On-Road Vehicle Emissions Workshop, San Diego, April 16, 2002.

attributed to diesel particulate emissions.[5] Another 20 percent was contributed by other toxics associated with mobile sources.

8. The State of California has the legal authority to adopt regulations to control on- and off-road vehicles and consumer products for criteria pollutants, and mobile and stationary sources for toxic air pollutants. It also has unique authorities under the federal Clean Air Act to adopt emissions standards for mobile sources that are more stringent than the federal controls. The CARB has developed a comprehensive master plan that addresses its control activities under the title "*Clean Air Plan: Strategies For A Healthy Future, 2002-2020.*"[6] The CARB Clean Air Plan (CAP) is currently undergoing public review and may be adopted by the CARB as state policy in mid-summer 2002. When adopted by the CARB's governing board, the CAP will constitute an action plan that will guide CARB's statewide control priorities and activities. The measures in the Clean Air Plan, and their prospective emission reductions and air quality benefits, would later be incorporated in locally developed regional plans, whether the regional plans are developed in response to federal or state Clean Air Act requirements.[7] While the CAP will not be submitted to EPA as a formal

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[5] South Coast Air Quality Management District, "Multiple Air Toxics Exposure Study II (MATES-II)," Diamond Bar, California, March 17, 2000, Section 7.1, finding 3.

[6] California Air Resources Board, Clean Air Plan: Strategies for a Healthy Future 2002-2020, *http://www.arb.ca.gov/planning/caplan/caplan.htm*

[7] Letter from Robert D. Fletcher, Chief, Planning and Technical Support Division, CARB, noticing the May 20-23, 2002 Workshops, page 1, *http://www.arb.ca.gov/planning/caplan/notice.doc*

State Implementation Plan (SIP) update, many of its commitments for additional emission reductions will become a part of the regional SIPs and thus become binding on the affected sources.[8]

9. An important component of the CAP, and of particular interest to the consequences of allowing Mexican trucks to pass through California areas, is the control of emissions from heavy-duty diesel vehicles. The CAP projects that in 2010, 44 percent of the NO_X emissions and 34 percent of the PM10 emissions from all on-road mobile sources will be from heavy-duty diesel vehicles.[9] The CAP proposes seven strategies to reduce emissions from heavy-duty engines and vehicles.[10] They include cleaner truck and bus incentives, community-based vehicle inspections, controlling vapors from gasoline cargo tankers, computerized systems to detect malfunctions and excess emissions, inspection of NO_X emissions from buses and trucks, requiring engine manufactures to test existing buses and trucks, and an extensive retrofit program to clean up the existing bus and truck fleet. The CAP also incorporates the CARB Diesel Risk Reduction Plan (DRRP) that earlier laid out a strategy to reduce emissions from diesel particulate matter.[11] The DRRP includes new regulatory standards for all diesel-fueled engines to reduce diesel PM emissions by 90 percent, retrofit of in-use engines, and the use of low sulfur fuel to provide the quality of diesel fuel needed by the advance diesel

[8] *Ibid.*

[9] California Air Resources Board, Clean Air Plan: Strategies for a Healthy Future 2002-2020, Sacramento, California, March 15, 2002, Pg. II-C-2

[10] *Ibid.*, Pg. II-C-10

[11] *Ibid.*, Pg. I-F-61,

PM emission controls.[12] CARB cannot extend the application of these emissions control measures to the Mexican vehicle fleet.

10. One of the more significant measures proposed in the CAP is a diesel retrofit rule.[13] A retrofit is a device installed on an existing, in-use vehicle to reduce exhaust emissions of one or more pollutants. The suggested rule would effect diesel retrofits for refuse haulers, fuel tanker trucks, public and publicly contracted, on–road, and off-road vehicles. CARB has indicated it will require 85 percent reduction in diesel particulate matter and full implementation of the regulation by 2007. Once again, these controls in the CAP proposal do not apply to Mexican vehicles and this will increase the impact those vehicles have upon air quality in California.

California areas are currently in violation of Federal and State Air Quality Standards

11. Both the United States Environmental Protection Agency (USEPA) and the California Air Resources Board (CARB) set ambient air quality standards applicable to California. USEPA's standards, known as National Ambient Air Quality Standards (NAAQS), are set under authority of the Federal Clean Air Act; CARB sets state standards under authority of the California Health and Safety Code. The list of pollutants for which the Federal and State governments have set standards are slightly different, but both governmental bodies have set standards for ozone

[12] CARB Diesel Risk Reduction Program, http://www.arb.ca.gov/diesel/dieselrrp.htm

[13] *Ibid*, On-road, heavy duty rule 7, Pursue Approaches to Clean Up the Existing Truck and Bus Fleet, Pg. II-C-19.

(O3) and for airborne particulate matter (PM) below a specified size, i.e., with aerodynamic diameter less than 10 μm (PM10). The USEPA reviews air quality monitoring data to identify localities with concentrations of pollutants that exceed the maximum allowable levels specified in the NAAQS. This information is used by the USEPA to define "nonattainment" areas. States such as California that have nonattainment areas are required to submit State Implementation Plans (SIPs) detailing the emission reduction measures they plan to adopt to achieve attainment of each applicable NAAQS by the attainment dates specified in the Clean Air Act. The CARB goes through a similar process for identifying nonattainment areas and air quality management plans must also be developed for these areas. Unlike the federal NAAQS, however, the State ambient air quality standards are not tied to any specific attainment date.

Tables 1 and 2 list, respectively, all current Federally designated ozone (O3) and particulate matter (PM10) nonattainment areas in California along with their nonattainment classifications as of 15 January 2002. Table 3 summarizes attainment/nonattainment status with respect to the California sate air quality standards for ozone (O3) and particulate matter (PM10). There are no specific dates specified in State law or regulations by which attainment must be achieved in areas designated nonattainment. However, the California Clean Air Act requires areas that violate the State standards to endeavor to attain them by the earliest practicable date. Most urban regions do not meet the State ozone standard and virtually all areas violate the existing PM10 standard. To aid attainment efforts, State law directs ARB to reduce emissions from vehicles, fuels and consumer products.

On-road Motor Vehicle Emissions Will Increase Without the TRO

12. If Mexican trucks are permitted to drive on California roadways, emissions from on-road motor vehicles in California will likely increase immediately. This is because emissions from Mexican trucks, on average, are higher than the US fleet. They are higher for two reasons. First, Mexican emissions standards for heavy-duty diesel vehicles were not established until 1993, and so pre-1993 Mexican vehicles will have much higher emissions than pre-1993 California vehicles. Second, the average age of the Mexican diesel line-haul fleet is much older than that in California, and those older vehicles have higher emissions.

Past and Future Emissions Regulations for Mexican Trucks Are Not as Stringent as US Regulations

13. Emissions for Mexican heavy-duty diesel vehicles were not implemented until the 1993 model year. Heavy-duty emissions standards for US trucks were in place for many years prior to 1993. Details of the standards may be found in ENVIRON's 18 April 2002 memorandum. For all model years prior to 1993, Mexican heavy-duty diesel vehicles will thus have higher emissions than US heavy-duty diesel vehicles from the same model year. In other words, a ten-year old Mexican truck will have higher emissions on average than a 10-year old US truck. FMCSA did not acknowledge these emissions standards differences in their air quality analysis.

14. The US has entered in legal agreements with engine manufacturers to retrofit heavy-duty engines to correct a defeat device employed by many manufacturers to circumvent emission regulations. This retrofit

agreement, which will reduce emissions from a portion of the US heavy-duty diesel vehicle fleet, does not apply to Mexican vehicles, thus resulting in higher per vehicle emissions for Mexican line-haul trucks compared with California or other US trucks. FMCSA did not acknowledge the emissions reductions from these retrofits that will be seen in US but not Mexican heavy-duty diesel vehicles.

15. FMCSA also did not acknowledge current differences between Mexican and California diesel fuel. California diesel fuel has additional requirements beyond federally mandated US diesel fuel, and the California diesel fuel has been shown in testing to produce lower NO_X and PM emissions in test engines.[14] Mexican trucks will have higher PM and NO_X emissions with the use of diesel fuels purchased outside California but consumed within California.

16. FMCSA performed their air quality analysis on the current fleet only. There are likely to be even larger emissions increases in future years. The US EPA has promulgated very strict NO_X and PM emissions standards for heavy-duty diesel vehicles beginning with the 2007 model year. These 2007 emissions standards are a factor of 20 times lower than the current standards for NO_X and a factor of ten times lower than current standards for PM_{10}. In addition, the 2007 regulations require diesel fuel sulfur levels to be significantly lower than current diesel fuel sulfur levels to enable emission control technologies to meet the future engine exhaust standards. We are not aware of any

[14] The ENVIRON April 18, 2002 memorandum cites the emissions benefits of California diesel fuel that are assumed by CARB in their EMFAC2001 on-road vehicle emissions model.

plans for Mexico to adopt either the more stringent US 2007 emissions standards or the low sulfur diesel fuel regulations, and so PM and NO_X emissions from future Mexican trucks will be significantly higher than US trucks in future years. In addition, California heavy-duty diesel vehicles that refuel in Mexico and return to operate within California may unintentionally compromise their emission control devices.

Mexican Heavy-Duty Diesel Trucks Are Older on Average Than US Heavy-Duty Diesel Trucks

17. Because of differences in emissions standards, the age of the Mexican truck fleet compared to the age of the California truck fleet is of paramount importance, as older vehicles on average have higher emissions. What is important in terms of emissions estimates is not just the average age of the fleet, but also how many miles on average each vehicle drives annually. The combination of vehicle age and number of miles driven per year as a function of vehicle age is referred to as the travel fraction. Figure 1 compares the California and Mexican truck travel fractions for so-called heavy-heavy-duty diesel vehicles, those trucks with gross vehicle weight rating of more than 60,000 pounds that constitute most of the line-haul trucking. These travel fractions are derived from the models that have been developed to estimate California on-road vehicle emissions (EMFAC2001, developed by CARB) and Mexican on-road vehicle emissions (MOBILE5-Mexico, a Mexican version of EPA's MOBILE5 on-road vehicle emission factor model.[15]) The travel fraction for a given age is

[15] "Mexico Emissions Inventory Program Manuals, Volume VI, Motor Vehicle Inventory Development," Radian International, May 17, 1996.

the fraction of total annual miles driven for the vehicle class.[16] For example, Figure 1 shows that one-year-old trucks in aggregate constitute about eight percent of the California heavy-heavy-duty diesel vehicles (HHDDV), but only about one percent of the Mexican HHDDV. Overall the figure shows that a far greater proportion of annual trucking miles are driven by older Mexican trucks than by older Californian trucks. Calculations using the travel fractions shown in Figure 1 show that in the Mexican HHDDV fleet, almost 80 percent of the miles are driven by trucks 10 years old or older; since Mexican diesel trucks were not regulated until 1993, these trucks in the current fleet are all uncontrolled. In the Californian HHDDV fleet, only about 45 percent of the miles are driven by HHDDV ten years or older.

[16] ENVIRON's April 18,2002 memorandum describes vehicle age distributions, which are part of the travel fraction distribution. The memorandum stated that CARB EMFAC2001 documentation says that they assumed that the age distributions for California and Mexican trucks are the same in EMFAC2001, but that we found different age distributions in the source code. Since that time, we have learned from CARB staff that CARB indeed assumed that the age distributions were the same at the time the model was developed because they did not have access to Mexican diesel fleet age distributions. Numerical differences now in the model source code are an artifact of updating California county age distributions but leaving the Mexican truck age distributions unchanged from the earliest version of EMFAC2001.

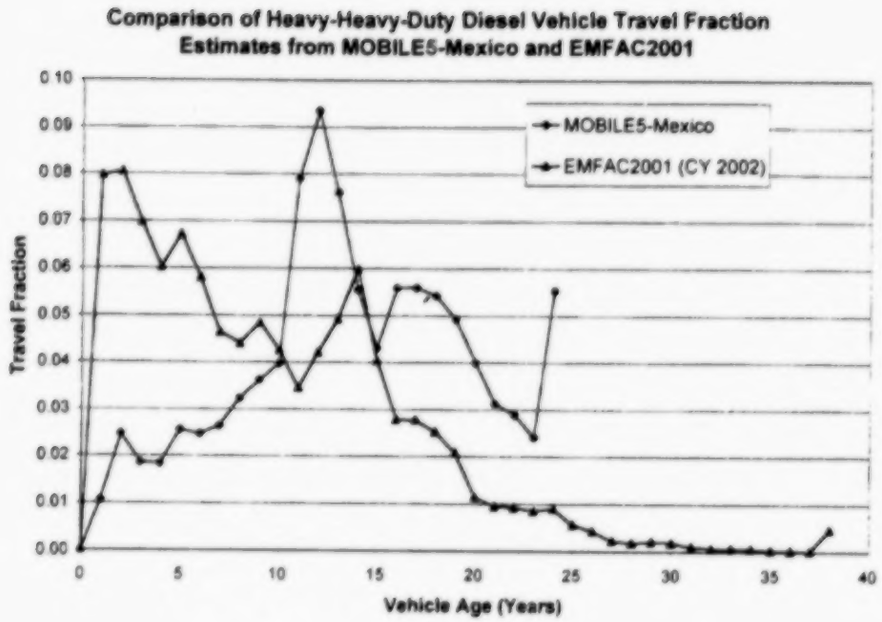


Figure 1. Travel fractions for California heavy-heavy-duty diesel vehicles (HHDDV) from CARB EMFAC2001 model compared to Mexican HHDDV from M5-Mexico model.

Travel on California Roadways by the Older Mexican Fleet with Less Stringent Emissions Regulations Will Immediately Increase On-road Vehicle Emissions in California, and Will Also Increase Emissions in the Future

18. The combination of the two factors discussed above—less stringent Mexican emissions standards and an older Mexican fleet—will very likely result in an immediate increase in emissions in California when the

Mexican trucks are permitted to drive past the border areas. We do not have sufficient time at this point to perform a detailed analysis, but the immediate emissions increase in each California ozone and PM nonattainment area (or county) can be estimated using CARB's EMFAC2001 model, the Mexican HHDDV travel fractions from the MOBILE5-Mexico model, and other available sources of information. Future year emissions increases can also be estimated using these models. Without Mexican adoption of the very stringent US EPA 2007 heavy-duty diesel emissions standards and diesel fuel sulfur regulations, the disparity between US and Mexican fleet emissions will increase over time in future years.

19. Critical to the estimation of emissions increases with Mexican trucks driving on California roadways is the estimate of the number of Mexican trucks that will cross the border and continue to drive through California on state roads. The US Customs Service reported slightly more than one million trucks crossing the border from Mexico into California in fiscal year 2001, of which the majority are Mexican trucks.[17] It is not yet clear what fraction of these Mexican trucks will drive past the border zone on California roadways, but even a very small fraction will likely cause an immediate emissions increase because of the significant differences in emissions standards and vehicle fleet ages.

[17] United States General Accounting Office, "North American Free Trade Agreement Coordinated Operation Plan Needed to Ensure Mexican Trucks' Compliance with U.S. Standards," GAO-02-238, December 2001, p. 5.

Table 1. Federal nonattainment classifications and attainment dates for areas in California designated nonattainment for ozone (O3). (Source: *http://www.epa.gov/oar/oaqps/greenbk*).

Area	Counties[18]
Chico	Butte
Eastern Kern County	Kern (P)
Imperial County	Imperial
Los Angeles South Coast Air Basin	Los Angeles (P), Orange, Riverside (P), San Bernardino (P)
Sacramento Metro	El Dorado (P), Placer (P), Sacramento, Solano (P), Sutter (P), Yolo
San Francisco Bay Area	Alameda, Contra Costa, Marin, Napa, San Francisco, San Mateo, Santa Clara, Solano (P), Sonoma (P)
San Joaquin Valley	Fresno, Kern (P), Kings, Madera, Merced, San Joaquin, Stanislaus, Tulare
Santa Barbara-Santa Maria-Lompoc	Santa Barbara
Southeast Desert Modified AQMA	Los Angeles (P), Riverside (P), San Bernardino (P)
Ventura County	Ventura
Yuba City	Sutter (P), Yuba

[18] (P) Indicates only a portion of the county is included within the area boundaries

O3 Classification[19]	O3 Attainment Date
Transitional (185a)	Appears to have attained in 2000
Serious	11-15-2001
Transitional (185a)	Nonattainment
Extreme	11-15-2010
Severe-15	11-15-2005
Other	11-15-2000 (200620)
Severe-15	11-15-2005
Serious	11-15-1999 (Attains, but not yet redesignated)
Severe-17	11-15-2007
Severe-15	11-15-2005
Transitional (185a)	Attains, but not yet re-designated

[19] Areas listed as "Transitional (185a)" were designated as an ozone nonattainment area as of the date of enactment of the Clean Air Act Amendments of 1990 but have not violated the national primary ambient air quality standard for ozone for the 36-month period commencing on January 1, 1987, and ending on December 31, 1989. Twelve areas were classified transitional in 1991. (See section 185A of the Clean Air Act.)

Table 2. Federal nonattainment classifications and attainment dates for areas in California designated nonattainment for particulate matter (PM_{10}). (Source: *http://www.epa.gov/oar/oaqps/greenbk*).

Area	Counties[20]
Coachella Valley	Riverside (P)
Imperial Valley	Imperial (P)
Los Angeles South Coast Air Basin	Los Angeles (P), Orange, Riverside (P), San Bernardino (P)
Mono Basin	Mono (P)
Owens Valley	Inyo (P)
Sacramento	Sacramento
San Bernardino	San Bernardino (P)
San Joaquin Valley	Fresno(P), Kern (P), Kings (P), Madera (P), San Joaquin (P), Stanislaus (P), Tulare (P)
Searles Valley	Inyo (P), Kern (P), San Bernardino (P)

[20] (P) Indicates only a portion of the county is included within the area boundaries

PM_{10} Classification	PM_{10} Attainment Date
Nonattainment (Serious)	12-31-2000 [21]
Nonattainment (Moderate)	12-31-1995[22]
Nonattainment (Serious)	12-31-2000
Nonattainment (Moderate)	Redesignation pending
Nonattainment (Serious)	12-31-2006
Nonattainment (Moderate)	Redesignation pending
Nonattainment (Moderate)	Redesignation pending
Nonattainment (Serious)	12-31-2001[23]
Nonattainment (Moderate)	12-31-95[24]

[21] Redesignation pending, but recently has shown new violations

[22] Attainment under 179B(d) of CAA ("but, for" clause)

[23] San Joaquin Valley failed to submit SIP, and EPA mandated new SIP by 12-31-2002

[24] On June 5, 2001, EPA proposed splitting Searles Valley into three separate NAAs–Trona, Coso Junction, and Indian Wells Valley. Trona attained by 12-31-1994; Coso Junction and Indian Wells Valley are reclassified as Serious. No final action yet by EPA nor new attainment deadlines.

Table 3. Status of California Air basins with respect to the state ambient air quality standards for ozone (O3) and particulate matter (PM_{10}). Source: *http://www.arb.ca.gov/desig/adm/adm.htm*.

Air Basin	Counties[1]
San Diego	San Diego
South Coast	Los Angeles (P), Orange, Riverside (P), San Bernardino (P)
Mojave Desert	San Bernardino (P), Riverside (P), Kern (P), Los Angeles (P)
Salton Sea	Imperial, Riverside (P)
South Central Coast	Ventura, Santa Barbara, San Louis Obispo (P)
Great Basin Valleys (Except Mono Co.)	Inyo, Alpine
Great Basin Valleys (Except Alpine and Inyo counties)	Mono
San Joaquin Valley	San Joaquin, Stanislaus,Merced, Fresno, Kings, Tulare, Kern (P), Madera
North Central Coast	Monterey, San Benito, Santa Cruz
San Francisco Bay	Marin, Napa, Sonoma (P), San Francisco, San Mateo, Santa Clara, Alameda, Contra Costa, Solano (P)
Lake Tahoe	El Dorado (P), Placer (P)
Mountain Counties (except Sierra and Plumas Counties)	Mariposa, Tuolumne, Calaveras, Amador, El Dorado, Placer, Nevada
Mountain Counties (Sierra and Plumas counties)	Sierra and Plumas

Sacramento Valley	Shasta, Tehama, Glenn, Butte, Colusa, Yuba, Sutter, Sacramento, Yolo, Solano (P)
Lake County	Lake
North Coast	Del Norte, Humboldt, Trinity, Mendocino, Sonoma (P)
Northeast Plateau	Modoc, Siskiyou, Lassen

O3 Status	**PM_{10} Status**
Nonattainment	Nonattainment
Nonattainment	Nonattainment
Nonattainment	Nonattainment
Nonattainment	Nonattainment
Nonattainment	Nonattainment
Unclassified	Nonattainment
Nonattainment	Nonattainment
Nonattainment	Nonattainment
Attainment	Nonattainment
Nonattainment	Nonattainment
Attainment	Nonattainment
Nonattainment	Nonattainment[25]
Unclassified	Nonattainment
Nonattainment[26]	Nonattainment
Attainment	Attainment
Attainment	Nonattainment
Attainment	Nonattainment

[25] Mariposa, Tuolomne, and Amador counties are designated "unclassified"

[26] Colusa county is classified as "nonattainment-transitional".

I declare under penalty of perjury that the foregoing is true and correct and that this declaration is executed on May 1, 2002, in San Francisco, California.

/s/ ALISON K. POLLACK
ALISON K. POLLACK

[Seal] **Air Resources Board** [Seal]

Alan C. Lloyd, Ph.D
Chairman

1001 _ Street * P.O. Box 2815 * Sacramento, California 95812 8 * www.arb.ia.gov

SENT VIA: E-MAIL:ED.OCHOA@doj.ca.gov.FAX to 8/19/645-2012 and U.S.P.S.

May 20, 2002

Mr. Ed Ochoa
Deputy Attorney General
Department of Justice
110 West A Street, Suite 1100
P.O. Box 85268
San Diego, CA 91816-5266

Re: Docket Nos. FMCSA 98-3298; 98-3299; and 2001-11060

Dear Mr. Ochoa:

The following information is provided in reference to the above-captioned docket numbers. This information provides clarification regarding a few points concerning the Air Resources Board's (ARB's) Heavy-Duty Vehicle Inspection Program (HDVIP), and particularly how it relates to Mexican registered vehicles traveling into California at the California-Mexican (CA-MX) border crossings.

The ARB administers the HDVIP throughout the state at California Highway Patrol (CHP) weigh stations, ports of entry, fleets and at random roadside locations. We currently maintain full-time inspection operations at the CA-MX border entry sites of Otay Mesa and Calexico as required by SB 270 (Peace) of 1998. Under this program, heavy-duty diesel vehicles are inspected for tampering, and undergo a smoke emissions opacity

test. Owners of vehicles that exceed the specified limits (55% opacity for pre-1991 model year engines and 40% for 1991 and later model year engines) and/or exhibit signs of emission control systems tampering, are issued a citation, are required to bring their vehicles into compliance within 45 days and pay a civil penalty ranging from $300 to $1800. All vehicles travelling on California highways are subject to this program, including vehicles based in other states and in foreign counties.

It is important to note that the smoke emission opacity tests performed under the HDVIP are not traditional "smog checks", such as those that are performed on passenger vehicles within California. A "smog check" test evaluates the chemical components of a vehicle's exhaust, while the HDVIP test simply measures the opacity of the exhaust emitted from the heavy-duty diesel vehicle's stack and includes a visual inspection of the emission control system to detect tampering. For more information on this program, please visit our web page at: www.arb.ca.gov/enf/enf.htm.

Commercial motor carriers from Mexico that fail either the opacity test or the tampering inspection are issued a citation, but are still allowed to enter California under existing law and its restrictions. The ARB enforcement staff provides follow up actions to make sure that the citation is cleared and that the vehicle is brought into compliance. For violators that fail to comply and clear their citations, the ARB can request that the CHP remove the vehicle from service.

While we would prefer to test every vehicle entering at these border sites that exhibits questionable levels of smoke emissions, we do not currently have the staff resources available to perform this level of service. As such, our inspectors perform a visual assessment of the emissions from the incoming vehicles, and complete

inspections on as many of the most offensive violators as possible.

With regard to your question as to whether or not all heavy-duty diesel vehicles are inspected for United States Environmental Protection Agency (U.S. EPA) emissions certification, they are not. If a vehicle owner applies for dual registration (CA-MX), and that vehicle has fewer than 7,500 miles (which, under California law classifies the vehicle as "new"), the emissions label is inspected by the DMV and the engine must meet California or 50-State U.S. EPA emissions standards. Similarly, those vehicles that are inspected under the ARB's HDVIP, are subject to an emissions label inspection.

I hope that this provides sufficient information to answer your questions. Please don't hesitate to contact me if you need further assistance. I may be reached at (916) 322-7061, or via e-mail at pjacobs@arb.ca.gov, or you may contact Ms. Elizabeth F. Miller of my staff at (916) 323-8541 or efmiller@arb.ca.gov.

Sincerely,

Paul E. Jacobs, Acting Chief
Enforcement Division

cc: Ms. Kathleen Walsh,
General Counsel
Air Resources Board

Ms. Mary Hackenbracht,
Senior Assistant Attorney General
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May 20, 2002

Sent via Facsimile
FMCSA-2001-11060-21

U.S. Department of Transportation
Docket Management Facility, Room PL-401
400 Seventh Street, S.W.
Washington, D.C. 20590-0001

Re: Docket No. FMCSA-2001-11060; Certification of Safety Auditors, Safety Investigators, and Safety Inspectors, Interim Final Rule; Request for Comments, 67 Fed. Reg. 12,776 (March 19, 2002)

Re: Docket No. NHTSA-02-11592; Notice 1, Record Keeping and Record Retention, Notice of Proposed Rule Making (NPRM), 67 Fed. Reg. 12,800 (March 19, 2002)

Re: Docket No. NHTSA-02-11593; Notice 1, Importation of Commercial Motor Vehicles, Notice of Proposed Rule Making (NPRM), 67 Fed. Reg. 12,806 (March 19, 2002)

On behalf of Public Citizen, the Environmental Law Foundation ("ELF"), California Labor Federation ("Cal Labor Fed"), International Brotherhood of Teamsters ("Teamsters"), Brotherhood of Teamsters, Auto and Truck Drivers Local 70 ("Local 70"), and California

Truck Association ("CTA"), we submit the following comments on the above-listed interim final and proposed rules.

* * * * *

We are especially concerned that the DOT's EA failed to consider and discuss the potential impacts resulting from important differences that exist between regulatory oversight of diesel engines in the United States and Mexico. For example, the major manufacturers of heavy-duty diesel engines for sale in the United States are subject to federal court consent decrees requiring the retrofitting of those engines with pollution control equipment and other measures designed to reduce pollution. We have previously submitted (via overnight mail delivery of May 17, 2002) one of these consent decrees, *United States of America v. Caterpillar, Inc.*, Civil Action 98-02544 and supporting appendices, filed July 1, 1999. The other consent decrees are available online at "http://es.epa.gov/oeca/ ore/aed/disel/condec. html." We ask that all of these consent decrees be made part of the record of decision.

There are at least two important issues regarding these consent decrees that were neither mentioned nor analyzed in the FMCA's EA. First, there is nothing in the record indicating that these consent decrees apply to diesel engines manufactured for sale or distribution in Mexico. The applicable Mexican official Norms make no mention whatsoever of these decrees. Second, the two major manufacturers of diesels in Mexico, Kenworth of Mexico, S.A. de C.V., and Mercedes Benz of Mexico, are not signatories to the consent decree. Certainly the EA should have analyzed these important regulatory distinctions in terms of the likely emissions differences that will result.

The EA also assumed that comparable emissions would result from Mexico-domiciled and U.S. domiciled trucks without considering whether there are any practical limitations or reasonable enforcement measures in place to ensure compliance with U.S. manufacturing standards. There are certainly practical limitations. For the upcoming and very stringent diesel emissions standards applicable in 2004 and 2007, the use of after treatment control devices by heavy-duty diesel engines will require the use of very low sulfur levels. Fuels containing in excess of 15 ppm will reduce the effectiveness of the after treatment devices and may in some cases permanently damage them. The EA had no basis to assume that very low sulfur fuels will be required or available in Mexico when the more stringent U.S. regulations come into force.

With respect to the use of enforcement measures, currently such enforcement is primarily delegated to the States. *See* GAO Report at 12, 18 (with regard to emissions inspections, U.S. EPA relies on states to establish and enforce their own enforcement procedures). For example, the State of Texas has no pollution testing whatsoever whereas the State of California has only a modest "on road" opacity emissions testing program in place. That program in no way is designed to examine whether individual truck engines meet U.S. regulatory requirements at the time of their manufacture. Indeed, such a program would be extremely costly and might be entirely impractical. In any event, the consequences of such a program, whether as an impact or feasible mitigation measure, should have been examined in the EA and was not.

* * * * *

02-70896 & 02-71249

IN THE UNITED STATES COURT OF APPEALS
FOR THE NINTH CIRCUIT

PUBLIC CITIZEN, INTERNATIONAL BROTHERHOOD OF TEAMSTERS, BROTHERHOOD OF TEAMSTERS AUTO & TRUCK DRIVERS LOCAL 70, CALIFORNIA LABOR FEDERATION, CALIFORNIA TRUCKING ASSOCIATION, AND ENVIRONMENTAL LAW FOUNDATION,
PETITIONERS
AND
NATURAL RESOURCES DEFENSE COUNCIL AND PLANNING AND CONSERVATION LEAGUE,
INTERVENORS

v.

DEPARTMENT OF TRANSPORTATION, FEDERAL MOTOR CARRIER SAFETY ADMINISTRATION, JOSEPH M. CLAPP, AND NICOHOLAS R. WALSH, RESPONDENTS

ON PETITION FOR REVIEW OF THE FEDERAL MOTOR CARRIER SAFETY ADMINISTRATION

BRIEF FOR THE RESPONDENTS

* * * * *

II. THE FMCSA'S FINDING OF NO SIGNIFICANT IMPACT UNDER NEPA WAS REASONABLE

Assuming, *arguendo*, that the Petitioners have standing to challenge the FMCSA's rulemaking, their claims must be rejected on the merits. To begin with, as to NEPA, the Petitioners have not demonstrated (and cannot demonstrate) that the FMCSA's environ-

mental analysis of the Application and Safety-Monitoring Rules was inadequate, or that the agency's finging of no significant impact was arbitrary and capricious.

A. The Safety Rules for Mexican Carriers, By Themselves, Will Not Significantly Impact the Environment

The Petitioners do not assert that the Application and Safety-Monitoring rules, standing alone, will or may have a significant impact on the environment. Nor do they challenge the general methodology by which the FMCSA evaluated the impacts of the rules by themselves. As described above, (pp. 25-32), the EA determined that the rules could effect air emissions in the United States: (1) by influencing the number of Mexican CMVs that will operate in the United States, and (2) by increasing inspections of Mexican CMVs. The EA concluded, however, that the rules would actually reduce the number of Mexican CMVs that will operate in the United States when compared to taking no action, (ER at 94), and that increased emissions from added vehicle inspections would be de minimis, because additional engine operating time would be a tiny fraction of overall operating time in the United States. ER at 98. The Petitioners do not challenge either conclusion.

Instead, the Petitioners contend (*Pet. Br.* At 17) that the FMCSA failed to adequately analyze alleged "connected" effects "unlocked" by the agency's rulemaking; namely, effects that may result from a Presidential decision to modify the trade moratorium. In so arguing, the Petitioners misapply CEQ guidelines as to the proper scope of NEPA analysis and accuse the FMCSA of failing to perform tasks that were not required.

B. The FMCSA Properly Limited Its NEPA Review to Its Own Rulemaking

As Petitioners note (*Pet. Br.* At 14, 18-20), federal agencies may not look to their actions in isolation when assessing impacts under NEPA. Rather, the CEQ regulations require agencies to consider actions "connected" to the actions in question, and also "indirect" and "cumulative" effects. *See* 40 C.F.R. §§ 1508.25 (defining proper "scope" of analysis); *see also* 40 C.F.R. §§ 1508.7 (defining "cumulative" impacts); 1508.8 (defining "effects"); *and* 1508.27(b)(7) (defining "significance"); *see also Kern v. United States Bureau of Land Management*, 284 F. 3d 1062, 1070 (9th Cir. 2002). Nonetheless, a determination of the appropriate "scope" of NEPA analysis is a matter "properly left to their formed discretion" of the agencies and will be overturned only if arbitrary and capricious. *Kleppe v. Sierra Club*, 427 U.S. 390, 412 (1976); *see also Churchill County*, 276 F.3d at 1075. Here, the FMCSA did not abuse its discretion in limiting its NEPA review primarily to the effects of its combined rulemaking.

1. The FMSCA Did Not Violate CEQ Regulations

Contrary to Petitioners' assertion (*Pet. Br.* at 19), the safety rules issued by the FMCSA and the President's decision on the trade moratorium do not fall into the categories of actions that "should be discussed in the same impact statement" under CEQ regulations. *See* 40 C.F.R. § 1508.25(a)(1). Such "connected" actions are defined as actions: (1) that "automatically trigger other actions," (2) that "cannot or will not proceed unless other actions are taken previously or simultaneously," or (3) that "are interdependent parts of a larger action and depend on the larger action for their justification." *See also Western Radio Services Co., Inc. v Glickman*,

123 F.3d 1189, 1195 (9th Cir. 1997) (applying definitions).

None of these definitions apply to the present case. First, the FMCSA's rulemaking did not (and will not) "automatically trigger" a Presidential decision on the moratorium. By statute' and such decision may be based on a variety of factors relating to trade and transportation policy, *see* 49 U.S.C. § 13902(C)(3), of which motor-carrier safety is but one component. Second, although the safety rules were issued in anticipation of the President's modification of the moratorium, Presidential action was not necessary for the rulemaking to "proceed." Finally, while the Application and Safety-Monitoring Rules depend (to a large degree) on a modification of the moratorium for their justification, the rules cannot be deemed an "interdependent" part of the President's action. While the President will surely look to safety issues when making any determination on the moratorium, the President's decision is not dependent on the challenged rules being in place. Further, as illustrated in the EA, the effects of the safety rules themselves (upon a relaxation of trade restrictions) are easily segregated from the broader effects of modifying the trade moratorium.

For similar reasons, the impacts of modifying the trade moratorium cannot be seen to be "indirect" or "cumulative" effects of the FMCSA's rulemaking. "Indirect" effects are effects "later in time" or "farther removed in distance," but still "caused by" an action. *See* 40 C.F.R. § 1508.8. While in the FMCSA's rulemaking and a modification of the moratorium are interrelated, the President's discretionary action on the moratorium—the condition precedent to the alleged

adverse environmental effects—cannot be said to be "caused by" such rulemaking.

Finally, "cumulative" impacts are defined as "*incremental* impacts" of agency action when added to "other past, present, and reasonably foreseeable actions." *See* 40 C.F.R. § 1508.7 (emphasis added). For example, a project divided into "component parts" with "individually insignificant" impacts may have "cumulative" significance when the parts are added together. *See* 40 C.F.R. § 1598.27(b)(7). Here, the Petitioners do not contend that the safety rules have "incremental" impacts that are "cumulatively significant" when combined with the impacts of modifying the moratorium. Rather, Petitioners allege that the anticipated modification of the moratorium will have significant impacts whether or not the safety rules and their individual impacts (*e.g*, emissions from increased inspections) are in place. Properly considered, such impacts are not "cumulative," but are impacts of the moratorium modification alone.

2. *The FMCSA Properly Limited Its NEPA Review To Matters Within Its Control*

An agency's determination of the scope of its environmental analysis—as with other discretionary decisions under NEPA—must be guided by the purpose of the statue. Because the principal purpose of NEPA is to "inject environmental considerations into the . . . decisionmaking process" of federal agencies, *Weinberger v. Catholic Action of Hawaii/Peace Education Project, 454* U.S. 139, 143 (1981), this Court has consistently recognized the NEPA obligations do not apply where an agency lacks decisionmaking discretion. *See Marbled Murrelet v. Babbitt*, 111 F.3d 1447, 1449-50

(9thy Cir. 1997); *Sierra Club v. Babbitt* 65 F,3d 1502m 1512-13 (9th Cir. 1995); *see also Citizens Against Rails-to-Trails ("CART") v. Surface Transportation Board*, 267 F.3d 1144, 1151 (D.C. Cir. 2001). As stated by the D.C. Circuit, when "the information that NEPA provides can have no affect on the agency's actions, . . . NEPA is inapplicable." *See CART*, 267 F.3d at 1151.

As noted above, the FMCSA's discretion in the present case does not extend to matters of international trade. While the agency has discretion ot determine the scope and extent of *safety* requirements for Mexican carriers (subject to the limitations imposed by Congress in Section 350 of the 2002 DOT Appropriations Act), the agency does not have discretion to bar Mexican carriers from U.S. markets for reasons relating to trade policy or the environmental consequences of trade policy. *See* 49 C.F.R. §§ 13902(a) & 31144(a). Thus, even if the further environmental review urged by Petitioners demonstrated that a modification of the trade moratorium would have significant impacts on air quality in various regions of the United States—a matter the Respondents dispute (*see* pp. 28-30, above) —such information could have no bearing on the FMCSA's decisions with respect to regulating the safety of Mexican carriers. Because the analysis requested by Petitioners would not be pertinent to the FMCSA's rulemaking, it simply cannot be said that the FMCSA acted arbitrarily and capriciously in not performing such analysis.

C. The Specific Objections Raised By Petitioners Lack Merit

Given the above, it is evident that the numerous specific allegations in the smorgasbord of complaints raised by Petitioners, Intervenors, and Amicus lack merit. These allegations: (1) exaggerate the probable impacts of modifying the trade moratorium, and (2) erroneously assert that the FMCSA was required to study such exaggerated impacts.

1. Petitioners Exaggerate Emissions Increases That Could Occur From A Modification of the Moratorium

A modification of the trade moratorium can lead to increases in air emissions in the United States only if: (a) there is a boost in overall truck traffic (rather than simply a shift from U.S. to Mexican carriers); or (b) there is a shift to Mexican carriers and the trucks operated by such carriers have significantly higher emissions than U.S.-domiciled trucks. Although there are reasons to believe such changes might occur, the Petitioners exaggerate the extent of such changes.

First, while NAFTA has significantly boosted cross-border trade by eliminating tariffs and other restrictions on imports from Mexico, (ER at 310-11), this does not mean, as Petitioners' suggest (*Pet. Br.* at 29-30) that a modification of the moratorium on cross-border trucking will necessarily produce a similarly dramatic increase in trade volume. In particular, while a modification of the moratorium on trucking will certainly allow Mexican carriers to transport Mexican goods further into the United States, (as opposed to transferring such goods to U.S. carriers within the border zones, SER at 14), there need not be any significant increase in the

amount of Mexican goods being transported. Absent a significant increase in the volume of trade, overall truck traffic (miles driven by U.S. and Mexican carriers combined) will remain constant.

Similarly, Petitioners overstate the increase in the number of Mexican trucks that will be operated in the United States. While the EA estimated that there could be up to 34,000 Mexican trucks operating in the United States beyond U.S. border zones in the first year following a modification of the trade moratorium, (ER at 46) this number does not represent the overall number of Mexican trucks that will be added to U.S. highways, as Petitioners suggest (*Pet. Br.* at 32). Rather, the EA estimated that the vast majority of these 34,000 trucks will be trucks that are already operating in the United States in the border zones. ER at 45-46.

Finally, the Petitioners overstate the impact of differences in U.S. and Mexican emissions standards. The Clean Air Act addresses motor-vehicle emissions through manufacturing standards applicable to vehicles and engine classes. To enforce these standards, the Act makes it unlawful for any manufacturer to sell, offer for sale, or otherwise introduce into commerce—or for any person to import into the United States—any vehicle or engine unless the EPA has certified that the vehicle or engine class complies with applicable standards issued by the EPA. See 42 U.S.C. § 7522(a). The EPA's initial emissions standards for heavy duty diesel engines ("HDDEs") became effective in 1988. The EPA has subsequently revised these standards on several occasions. *See e.g.*, 40 C.F.R. §§ 86.091-11 (standards for 1991 and after); 86.094-11 (current standard for PM-10, effective in 1994); 86.098-11 (current standard for NO_x, effective in 1998). The EPA's most recent revisions will

tighten NO_x and PM standards in both 2004 and 2007. *See* 40 C.F.R. §§ 86.004-11; 86.007-11.

In 1993, Mexico adopted emissions standards for HDDEs identical to the current U.S. standards. ER at 280. These standards ensure basic equivalency between Mexican and U.S. trucks for model years 1993 through 2002.[9] *Ibid.* Nevertheless, because Mexico did not have standards before 1993, and because the average age of Mexican trucks is greater than that of U.S. trucks, Petitioners assert, (Pet. Br. at 33-34), that emissions from Mexican trucks are likely to be greater, on average, than emissions from United States trucks.

Assuming the Petitioners are correct, there are reasons to believe that any differences in emissions between U.S. trucks and Mexican trucks operating in the United States will not be as great as Petitioners predict. First, the heightened standards put into place by the challenged safety rules will tend to restrict the number of older (pre-1993) Mexican trucks that can be operated in the United States. Second, the generally older trucks currently used by Mexican carriers for short-haul operations into the border zones cannot be taken as an indicator for the condition of Mexican long-haul trucks. SER at 14. Third, there are mechanisms under NAFTA that encourage cooperation between Mexico and the U.S. on the development of equivalent environmental standards. Among other things, the parties to NAFTA negotiated a side agreement on

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[9] Manufactures of HDDEs sold in the United States agreed to meet 2004 standards on an advanced deadline—i.e., by Ocotober 2002—as part of a consent decree to settle an enforcement action than charged the manufacturers with employing "defeat devices" that caused on-road emissions to be higher than emissions during compliance tests. EA 295, 380.

environmental cooperation that created a trilateral commission to address various environmental laws and standards. *See* 19 U.S.C. § 3472 (NAFTA Implementation Act); *see also* Executive Order No. 12915, 59 Fed. Reg. 25775 (May 13, 1994) (order on implementation of North American Agreement on Environmental Cooperation). Finally, whether or not Mexico revises its domestic standards to stay in line with the scheduled tightening of U.S. standards in 2004 and 2007, trucks operated by Mexican carriers in the United States could be subject to the U.S. Clean Air Act standards, depending on the circumstances of their operation.[10]

2. The Petitioners' Complaints Go Beyond the Scope of the FMCSA's NEPA Analysis

Even if the Petitioners' broad predictions about the effects of Presidential action on the trade moratorium have merit, the specific objections levied by petitioners against the FMCS's NEPA analysis do not. As explained above, (p. 49), if the challenged safety rules do cause an increase in emissions, the increase will be limited to emissions from added safety inspections that were not required under pre-existing rules. Petitioners have not identified any flaw in the FMCSA's analysis of these inspection- related emissions.

While the Petitioners assert (*Pet. Br.* at 32-35) that the FMCSA committed fundamental errors in estimating emissions, the Petitioners' objections are unfounded. The EA estimated emissions by using data from EPA emissions models for U.S. trucks. ER at 130.

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[10] Mexican carriers engaged in cross-border operations into the United States may be subject to the prohibition on "importing" vehicles into the United States without a certificate of conformity. *See* 42 U.S.C. § 7522(a).

In manipulating such data to represent emissions from the inspection of Mexican trucks under the challenged rules, the EA reasonably assumed that one third of the Mexican trucks would have emissions comparable to trucks manufactured in the United States in 1994, while the remaining Mexican trucks would have emissions comparable to U.S. trucks manufactured in 1986. *Ibid.*

Petitioners assert (*Pet. Br.* at 33-34) that these assumptions are unreasonable because they misrepresent the age distribution of Mexican trucks and fail to account for emissions differences between Mexican and U.S. trucks. However, neither complaint survives scrutiny. As to age distribution, the Petitioners rely on reports estimating that 10 to 20 percent of trucks operated in Mexico (as opposed to one third) were manufactured in 1994 or after. *See Pet. Br.* at 34 (citing ER at 293, 314). These estimates differ little from the EA estimate and do not account for changes in age distribution of the cross-border fleet that could be prompted by the enhanced safety rules. As to emissions equivalency, the FMCSA had good reason to believe that the EPA models would reasonable approximate emissions from Mexican trucks. For the estimated one-third of Mexican trucks manufactured in 1994 or after, the emissions standards in both countries were the same. ER at 280. For the remaining trucks, the EA used emissions data from a model year (1986) when *neither* the United States or Mexico had significant emissions controls for HDDEs in place. Consequently, although the EA recognized that EPA emissions models "may not be applicable to Mexican vehicles," (ER at 131) it was not arbitrary for the EA to conclude that conservative assumptions otherwise built into the estimate

would "override" any deficiencies in the emissions models. *Ibid.*

Further, any alleged errors in the FMCSA's estimate of inspection-related emissions must be viewed in context. Because inspection-related emissions are such a tiny fraction of overall emissions from Mexican carriers and an even smaller fraction of emissions from commercial motor carriers in general, (*see* p. 32, above) absolute precision in quantifying this fraction was not required.

Indeed, for the same or similar reasons, all of the remaining NEPA objections raised by Petitioners, Intervenors, and Amicus must fall. Among other things:

(1) because the estimated nationwide emissions from the challenged rules would be de minimis even if aggregated in a single non-attainment area, (*see* p. 67, below), study of the "localized" impacts of such emissions would not be meaningful and was not required, *see Pet. Br.* at 35-36, *Int. Br.* at 28-29; *Am. Br.* at 20-21 (citing 40 C.F.R. § 1508.27(a));

(2) because the rules have no meaningful "localized" impacts, there was no reason for FMCSA to believe—as the parties assert (*Int. Br.* at 16; *Am. Br.* at 21)—that the rules may violate any federal or state air quality standards for any particular region, (*see* 40 C.F.R. § 1508.27(b)(10));

(3) because inspection-related emissions will remain a fraction of overall operational emissions in future years, the FMCSA did not act unreasonably, as the parties allege (*Pet. Br.* at 36; *Int. Br.* at 18-19, Am. Br. at 21, in performing emissions estimates only for the year after the rules go into effect, *see* 40 C.F.R. § 1508.27(b)(6);

(4) because the constituents of inspection-related emissions will be the same as, and an insignificant part of, overall emissions from trucks operating in the United States, the FMCSA did not act unreasonably, (*see Int. Br.* at 20-26; Am. Br. at 22), in failing to analyze the specific effects of inspection-related emissions on cancer rates generally or on cancer rates generally or on respiratory illnesses among children; and

(5) because the Petitioners never challenged the EA's analysis of the effects of the safety rules themselves—as distinguished from the effects of modifying the trade moratorium—the environmental effects of the FMCSA's rulemaking cannot be described as "highly controversial," (*see* 40 C.F.R. § 1508.27(b)(4), even if there may be controversy over the effects of modifying the trade moratorium (*see Pet. Br.* at 40).

In sum, none of the above alleged flaws (or any other alleged flaw) in the EA amounts to a flaw when viewed in context of the scope of the challenged rules and the scope of the EA. Because the Petitioners have not raised "substantial questions" about whether the challenged rules will have significant environmental impacts, the FMCSA's FONSI must be upheld. *Wetlands Action Network*, 222 F.3d at 1119-20.

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UNITED STATES COURT OF APPEALS
FOR THE NINTH CIRCUIT

Case Nos. 02-70986, 02-71249

PUBLIC CITIZEN, ET AL., PETITIONERS

v.

DEPARTMENT OF TRANSPORTATION ET AL.,
RESPONDENTS

NATURAL RESOURCES DEFENSE
COUNCIL, ET AL., INTERVENORS

Petition for Review of Interim
Final Rules Promulgated by Federal Motor Carrier
Safety Administration

PETITIONERS' EVIDENCE IN SUPPORT OF STANDING

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INDEX OF DECLARATIONS

Declarant	**Tab**
Laura MacCleery	01
John Wilson	02
Richard C. Bell	03
Anna Sebastian	04

DECLARATION OF LAURA MACCLEERY

I, Laura MacCleery, declare as follows:

1. I am Laura MacCleery, Counsel for Auto Safety and Regulatory Affairs of Public Citizen. I have held that position since September 2000, I am capable of making and authorized to make the following declaration as a result of my duties and authority at Public Citizen. I am admitted to practice law in the State of Colorado, and am currently on inactive status.

2. I am aware of Public Citizen's status as a membership organization. Public Citizen is a national, nonprofit consumer advocacy organization founded in 1971 to represent consumer interests in Congress, the executive branch and the courts and chartered under the laws of the District of Columbia as a membership organization. Public Citizen's national office is located in Washington, D.C. and has several national divisions, including our Critical Mass Energy and Environment Program. Public Citizen has approximately 125,000 members in the United States.

3. Some of Public Citizen's member include residents along the Mexican border area in the United States and will be negatively affected by increases in emissions as a result of the implementation of the rules in question in this case. In California, Public Citizen has approximately 34,005 member. About 2,567 of those members live in greater Los Angeles, 1,205 live in the San Diego area, and 10 live in El Centro, California, in Imperial County. In Texas, Public Citizen has approximately 7,652 members, 1,094 of whom live in the greater Houston area.

4. I am familiar with the two Petitions for Review filed by Public Citizen and other organizations against

various agencies and officials of the federal government, known as *Public Citizen v. Department of Transportation*, Ninth Circuit Case Nos. 02-70986, 02-71249. Public Citizen seeks to prevent the negative health effects that will result if Mexico-domiciled trucks begin operating throughout the United States: In particular, Public Citizen members live and work in such areas as Los Angeles, San Diego, and Houston–areas that will be most affected by increased emissions from Mexico-domiciled trucks–will be exposed to such emissions, and as a result may suffer adverse health effects.

5. Public Citizen fights for broad range of public interest issues. Many of these issues relate directly or indirectly to environmental concerns. As part of the Coalition for Sensible Safeguards, a coalition comprised of environmental labor and other watchdog groups, Public Citizen opposes cross-agency requirements imposed by the Office of Management and Budget which have the effect of hampering, delaying or eliminating environmental and public health regulations. Overall, many aspects of Public Citizen's program of activities and involvement seek to preserve the public health and natural environment. Specific examples are below.

6. Public Citizen's Critical Mass Energy and Environment Program works to protect citizens and the environment from the dangers posed by nuclear power and seek policies that will lead to safe, affordable and environmentally sustainable energy. It also advocates creation of an agricultural and food distribution system that guarantees safe, wholesome food produced in a humane and sustainable manner, and works to safeguard the world's fragile water resources from exploitation, privatization, and mass diversion. This program has carried out the following actions: 1) An aggressive

public campaign to defeat the siting of Yucca Mountain, Nevada, as a nuclear waste repository, in part due to the environmental consequence for that area and the environmental hazards posed by transportation of nuclear waste; 2) Exposed fraud inherent in "green power" in the context of the deregulation of the electricity markets; 3) Organized the opposition to water privatization efforts in New Orleans, Louisiana and Stockton, California.

7. Public Citizen's Congress Watch program works to protect consumer interests before the U.S. Congress and serves as a government watchdog. Public Citizen is committed to preserving health, safety and environmental safeguards in face of a political opposition from regulated industries, thereby preventing "regulatory rollback." Toward this end, Public Citizen acts as a watchdog, overseeing congressional, executive branch and federal agency actions affecting the regulatory process, alerting the public and Congress when safeguards are threatened, and encouraging Congress to enact legislation that puts public health, safety and the environment first. This program has carried out the following actions: 1) Urged Congressional and public support for the precautionary principle, which is a system of decision-making on regulatory priorities and programs that would put public health and environmental impacts at the center of policymaking; 2) Vigorously opposed the nomination of John Graham, a chemical, mining, steel and auto industry-backed academic, to become the nation's "regulatory czar" at the Office of Information and Regulatory Affairs, because we believed that he would work to block environmental and public health and safety protections; 3) Continue to participate in efforts to monitor the Bush

Administration's impact on health, safety and environment in the regulatory context.

8. Public Citizen's Global Trade Watch program leads the way in educating the American public about the enormous impact of intentional trade and economic globalization on our jobs, the environment, public health and safety, and democratic accountability. High among the issues handled by the Global Trade Watch program is the environment which is being threatened by corporate-led globalization, including the downward "harmonization" of health, safety and environmental standards and the over-ruling of national and local environmental standards by unaccountable international tribunals. This program has carried out the following actions: 1) With the Public Citizen President's Office, organized opposition to the forced opening of the U.S.-Mexico border under the North American Free Trade Agreement (NAFTA) to long-haul trucks due to the environmental and safety risks posed by such trucks; 2) Built a strong grassroots movement to protest over-reaching by the World Trade Organization; and 3) Regularly publishes Harmonization Alert to inform citizens of threats to hard-won environmental and public health standards.

9. Public Citizen maintains two state offices in California and Texas. Among other issues, the Public Citizen's Texas State office concerns itself with environmental enforcement policies, clean air issues, global warming education, promoting renewable/clean energy, product safety, nuclear safety, and pesticide safety in schools and for the general public. Public Citizen's Texas office recently published a report entitled "Dirty, Dangerous and Deadly Diesels," detailing the latest evidence on threats to the human

health and the environment from carcinogens in diesel exhaust.

I declare under penalty of perjury under the laws of the United States and the District of Columbia that the foregoing is true and correct to the best of my knowledge.

Executed at Washington, DC, this 30th day of July, 2002.

/s/ LAURA MACCLEERY
LAURA MACCLEERY

DECLARATION OF JOHN WILSON

I, John D. Wilson, declare as follows:

1. I am currently a member of Public Citizen and have been a member since 1995. I am also Executive Director of the Galveston-Houston Association for Smog Prevention (GHASP). GHASP is a community based environmental organization dedicated to improving the quality of our region's hazardous air.

2. I am with the Petition filed by Public Citizen and other organizations against various agencies and officials of the federal government, known as *Public Citizen v. Department of Transportation*, Ninth Circuit Case Nos. 02-70986, 02-71249. Public Citizen seeks to prevent the negative health effects that will result if Mexico-domiciled trucks begin operating throughout the United States.

3. I am a resident of Texas and reside at 518 Woodland in the Woodland Heights area of Houston, just northwest of the intersection of Interstate 10 and Interstate 45. During the most pollution-prone periods, the prevailing winds are from the southeast. As a result, this area is heavily impacted by diesel pollution primarily from large commercial trucks. I spend most of my time in the Houston area and therefore am directly affected by diesel pollutants that affect Houston. I am married and have a 10-month-old baby and have serious concerns about the health effects of air pollution upon my family.

4. Smog levels are extremely bad in the Houston area. As a result, I am forced to limit outdoor activities extensively to protect my families' health. I keep myself informed as to predicted smog levels by subscribing to an ozone alert email list that is offered by

local government. Due to the extreme smog problems in Houston, I often receive these email alerts. When I receive these alerts I severely limit the outdoor activities of my family, including walking, hiking and jogging activities, and I try to avoid taking my daughter outside. In particular, I avoid Memorial Park during ozone warning, which is one of our favorite places to enjoy the outdoors in Houston.

5. Air pollution on Houston freeways is hazardous. I am familiar with studies that show elevated levels of pollution when driving on crowded freeways. Although I often prefer to drive on smaller roads, due to the transportation system in Houston it is often necessary to drive in heavy traffic with many large diesel trucks. I am concerned about the long-term effect that breathing this pollution will have on my family, but I am unable to avoid congested or heavily traveled freeways with many diesel vehicles.

6. I declare under penalty of perjury under the laws of the United States and the State of Texas that the foregoing is true and correct to the best of my knowledge.

Executed at 518 Woodland, Houston, TX, this 30th day of July, 2002.

Signature Illegible

DECLARATION OF RICHARD C. BELL

I, Richard C. Bell, declare as follows:

1. I am the Executive Assistant to C. Thomas Keegel, the General Secretary-Treasury of the International Brotherhood of Teamsters, AFL-CIO ("IBT"). I am familiar with IBT's membership records, because I have worked with them in various capacities since 1971.

2. The IBT is one of the largest labor unions in the world. The IBT 1.4 million members, who live throughout the United States and Canada. Of that number, 1.29 million alone live in the contiguous United States. Approximately 130,000 IBT members work in the freight industry. Some of these members include truck drivers who haul goods from the Mexican border area throughout the United States. In California alone, the IBT has approximately 201,877 members. About 134,429 of those members live in Los Angeles, San Diego, and Imperial Counties. In Texas, the IBT has approximately 28,000 members, 6,200 of whom live in Harris County (which includes Houston).

3. I am familiar with two Petitions for Review filed by the IBT and other organizations against various agencies and officials of the federal government, known as *Public Citizen v. Department of Transportation*, Ninth Circuit Case Nos. 02-70986, 02-71249. The IBT seeks to prevent two primary effects that will result if Mexico-domiciled trucks begins operating throughout the United States: First, IBT members who live and work in such areas as Los Angeles, San Diego, and Houston - areas that will be most affected by increased emission from Mexico-domiciled trucks-will be exposed to such emissions, and as a result may suffer adverse health effects. Second, freight carriers operating U.S.-

domiciled trucks, which are subject to expensive emissions control requirements, will likely be undercut by companies availing themselves of the less costly purchase and operation of Mexico-domiciled trucks. The decreased business available to U.S. domiciled trucks will likely result in lay-offs of U.S. truck drivers, including IBT members.

4. Attached as Exhibit A is a true and correct copy of the cover page and Article I of the IBT Constitution. The objects of the IBT as set forth in Article I of the Constitution include improving working conditions; advancing the rights of workers and the welfare of all people; and engaging in activities that further the interests of IBT members. Under this broad mandate, the IBT has taken a number of actions to protect the environment and the health of its members and others.

5. For instance, on February 7, 1994, IBT filed a Petition for Review in the United States Court of Appeals for the D.C. Circuit to challenge under the Clear Air Act an EPA rule with respect to the pesticide methyl bromide that could adversely affect the health of IBT members. Attached as Exhibit B is a true and correct copy of the Petition for Review. Attached as Exhibit C is Petitioners' Statement of Issues to be Raised, filed March 17, 1994, in the methyl bromide action. That Statement presents four issues with respect to why the EPA rule was inadequate to protect public health and the environment. On January 29, 1998, the parties settled the action, with EPA agreeing to modify its rule. Attached as Exhibit D is a true and correct copy of the settlement agreement.

I declare under penalty of perjury under the laws of the United States and the District of Columbia that the

foregoing is true and correct to the best of my knowledge.

Executed at Washington, D.C., this 1st day of August, 2002.

/s/ RICHARD C. BELL
RICHARD C. BELL

* * * * *

DECLARATION OF ANNA SEBASTIAN

I, Anna Sebastian, declare as follows:

1. I am currently a member of Teamster Local 63 and have been a member for eighteen years.

2. I am generally familiar with the Petition filed by Teamsters and other organizations against various agencies and officials of the federal government, known as *Public Citizen v. Department of Transportation*, Ninth Circuit Case Nos. 02-70986, 02-71249. Teamsters seek to prevent the negative health effects that will result if Mexico-domiciled trucks begin operating throughout the United States.

3. I am a resident of California and reside at 235 South Platina Drive, Diamond Bar California. I work in Rialto California near Riverside. These areas are heavily impacted by diesel pollution primarily from large commercial trucks. I spend most of my time in or around the greater Los Angeles areas. I have a six-year old son and have serious concerns about the health effects of air pollution upon my family. Indeed, both my son and I have asthma that is made worse by any increases in smog levels.

4. Smog levels are extremely bad in the Los Angeles County and Rialto area. As a result, I am forced to limit outdoor activities to protect my families' health. I pay attention to pollution levels and keep myself informed as to predicted smog levels by watching television news reports. When the reports suggest high levels I make my child play indoors to minimize the negative health impact. In particular, I do not let my child play baseball in the park on smoggy days despite the fact that he loves to play this sport. Also,

when the days are smoggy we cannot see the beautiful mountains to the North.

5. If for some reason we do end up outside on smoggy days, I am required to do a breathing treatment for my son and myself so that we may sleep.

6. I declare under penalty of perjury under the laws of the United States and the State of California that the foregoing is true and correct to the best of my knowledge.

Executed at Rialto, California, this 1st day of August, 2002.

Signature Illegible